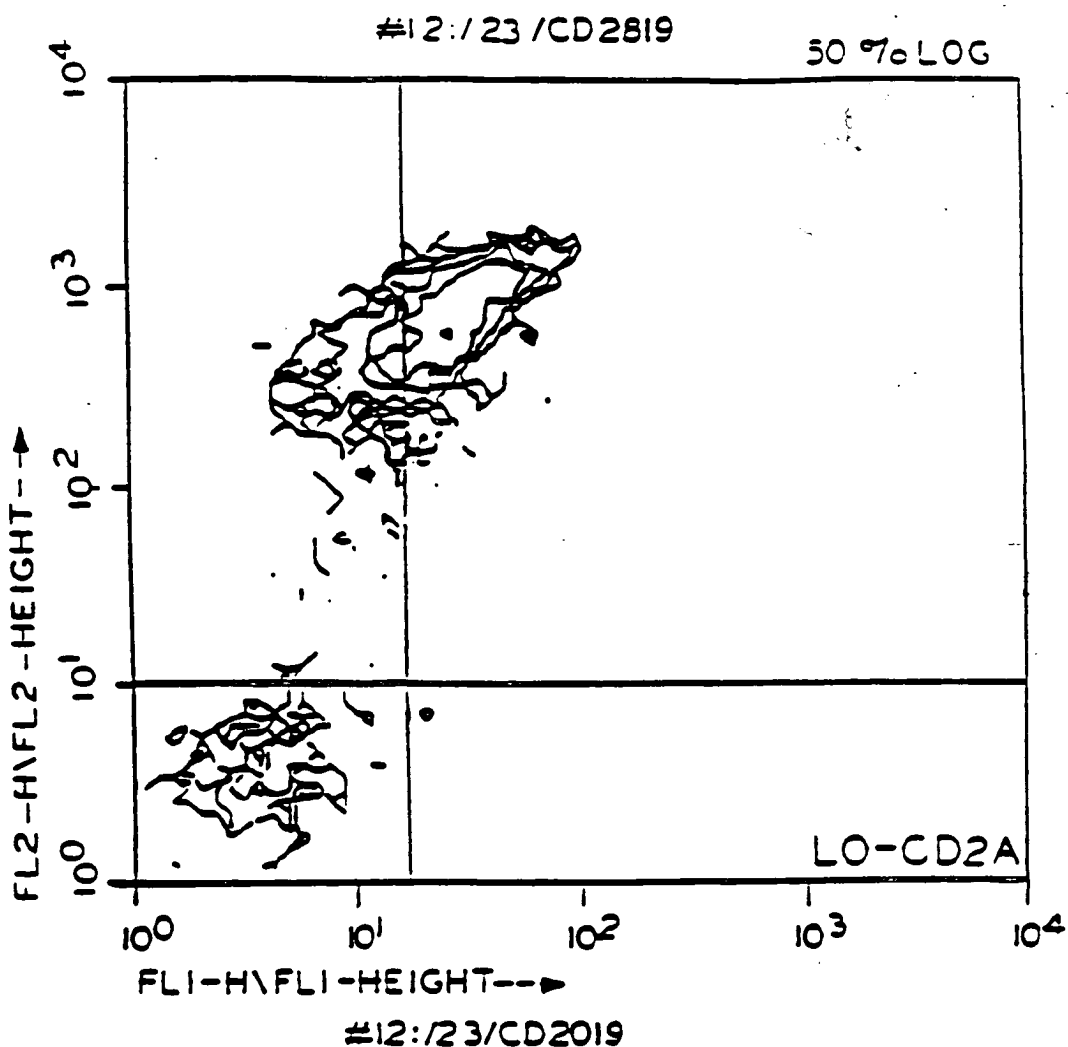


5951983

FIG 08/477989



--- QUAD STATS ---

FILE: #12:/23/CD2019 SAMPLE: 039

DATE: 9/24/92 GATE G1-R1

PARMETER: FL1-H\ (LOG) FL2-H (LOG) QUAD LOCATION: 17.13.9

TOTAL= 5000 GATED= 1290

QUAD EVENTS % GATED % TOTAL X MEAN Y MEAN

IUL	299	23.18	3.98	11.41	284.69
2UR	831	65.97	17.02	32.70	630.65
3LL	135	10.47	2.70	4.08	3.31
4LR	5	0.39	0.10	25.11	6.54

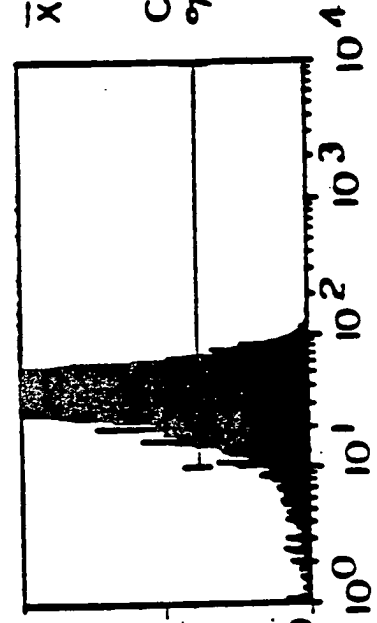
ACO CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN
FINISH
ABORT
RESTART

ZOOM 128

TYPE
GI
DOTS
RGN
STAT



$\bar{X} = 387.6$
32.7
CU = 13.3
%o = 91.8

ACQ MODES

ALL CELLS

TOTAL

18,980

TOTAL RATE

0

ACCEPT

18,980

ELAPSED TIME

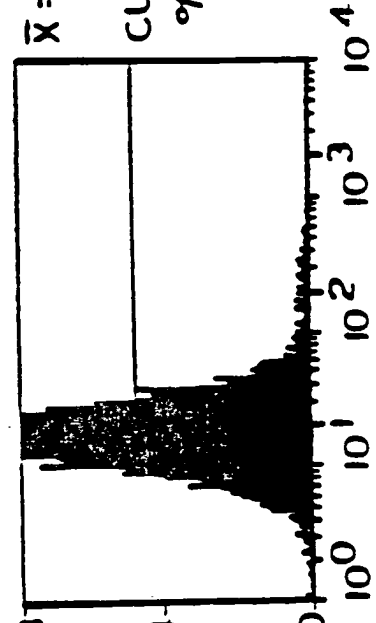
00:00:48

FIG. 2A

FL1-HEIGHT LOCD2-a

ZOOM 128

TYPE
GI
DOTS
RGN
STAT



$\bar{X} = 342.1$
21.7
CU = 19.4
%o = 79.1

FL2-HEIGHT T11-.

ACQ CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN

FINISH

ABORT

RESTART

ZOOM 128

TYPE

GI

DOTS

RGN

STAT

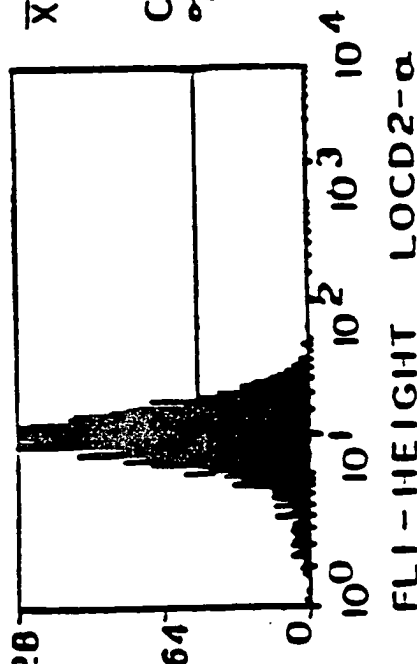


FIG. 2B

ACQ MODES

ALL CELLS

TOTAL

13,740

TOTAL RATE

0

ACCEPT

13,740

ELAPSED TIME

00:00:35

ZOOM 128

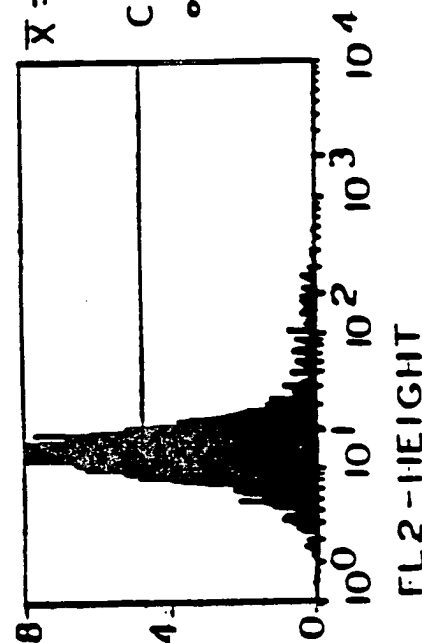
TYPE

GI

DOTS

RGN

STAT



Leu5-b

FIG. 3B

PBMC WITH LO-CD2- α

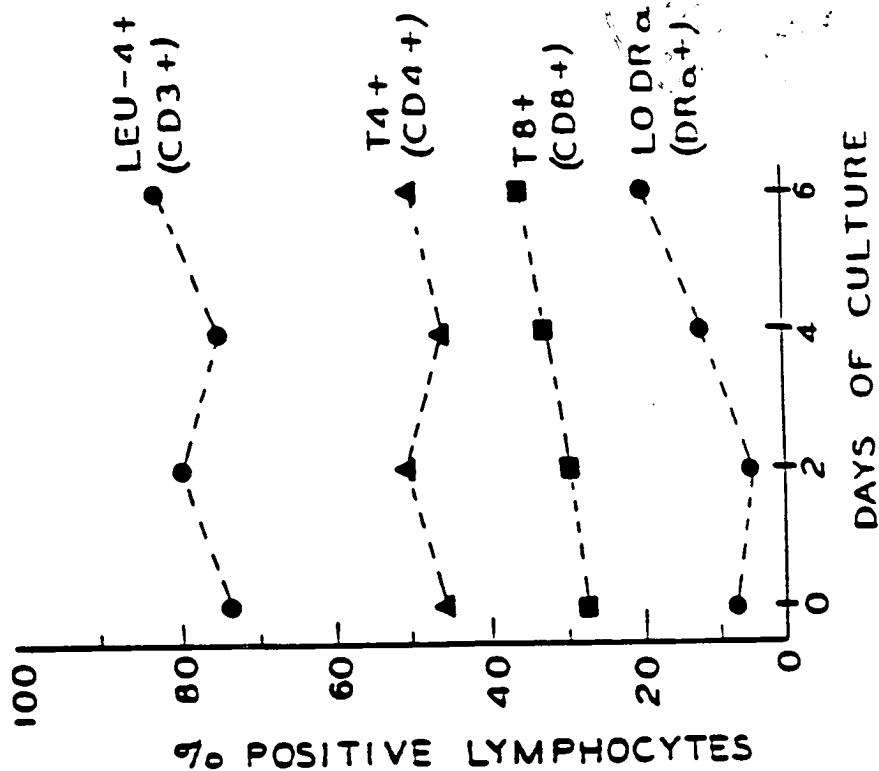
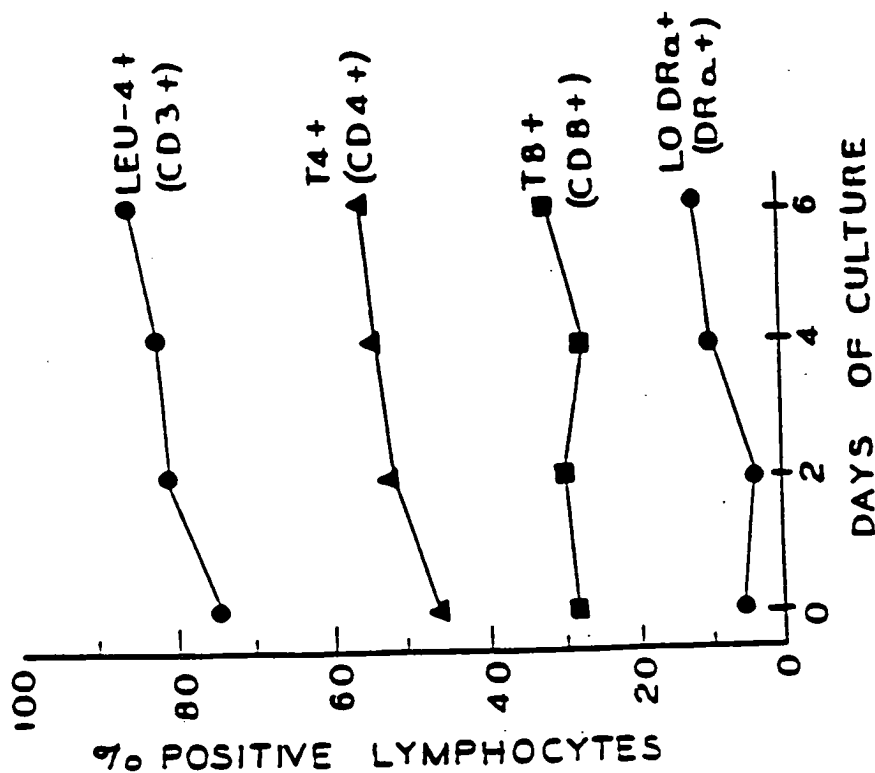


FIG. 3A

PBMC WITHOUT LO-CD2- α



Percentage of Positive Cells

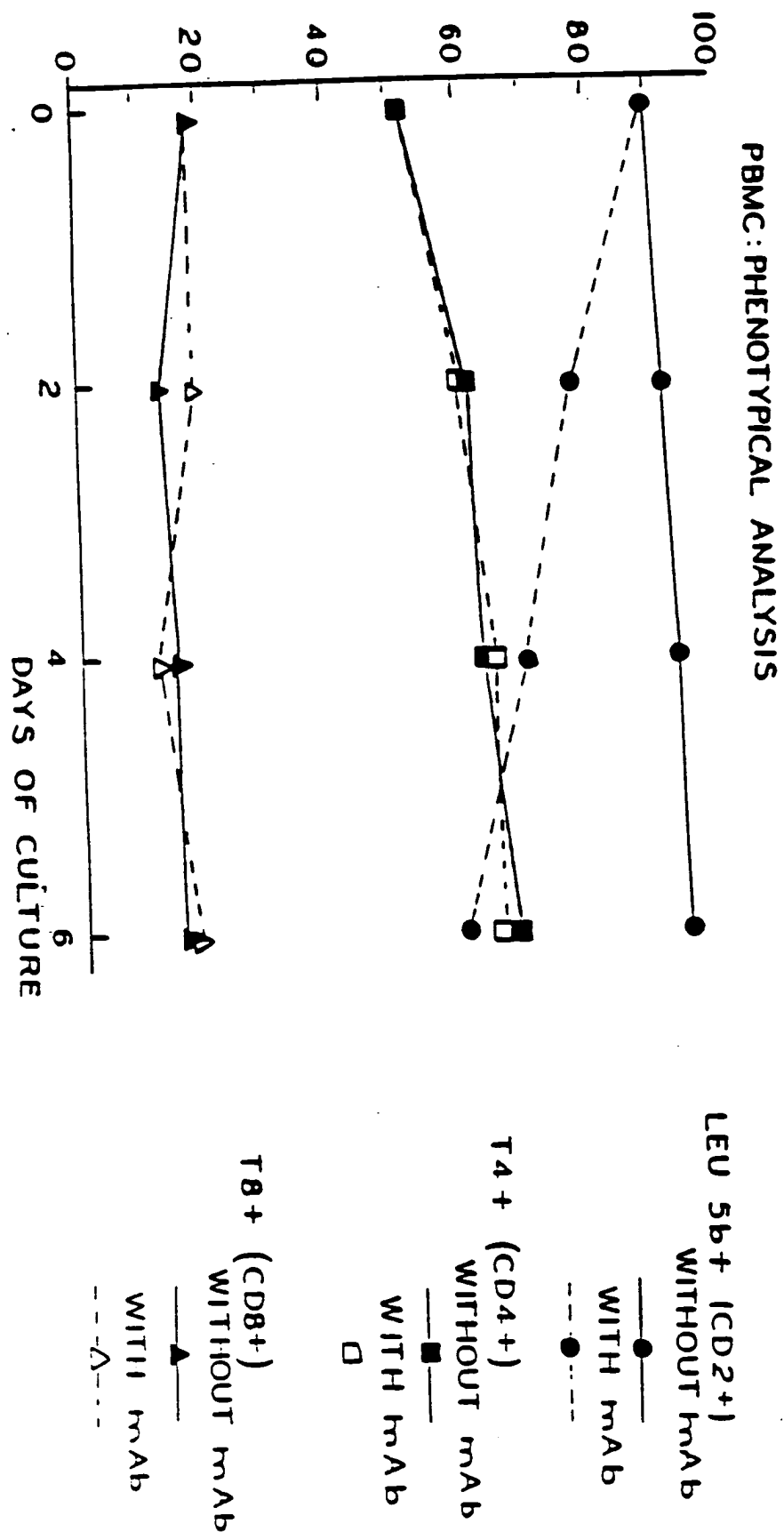
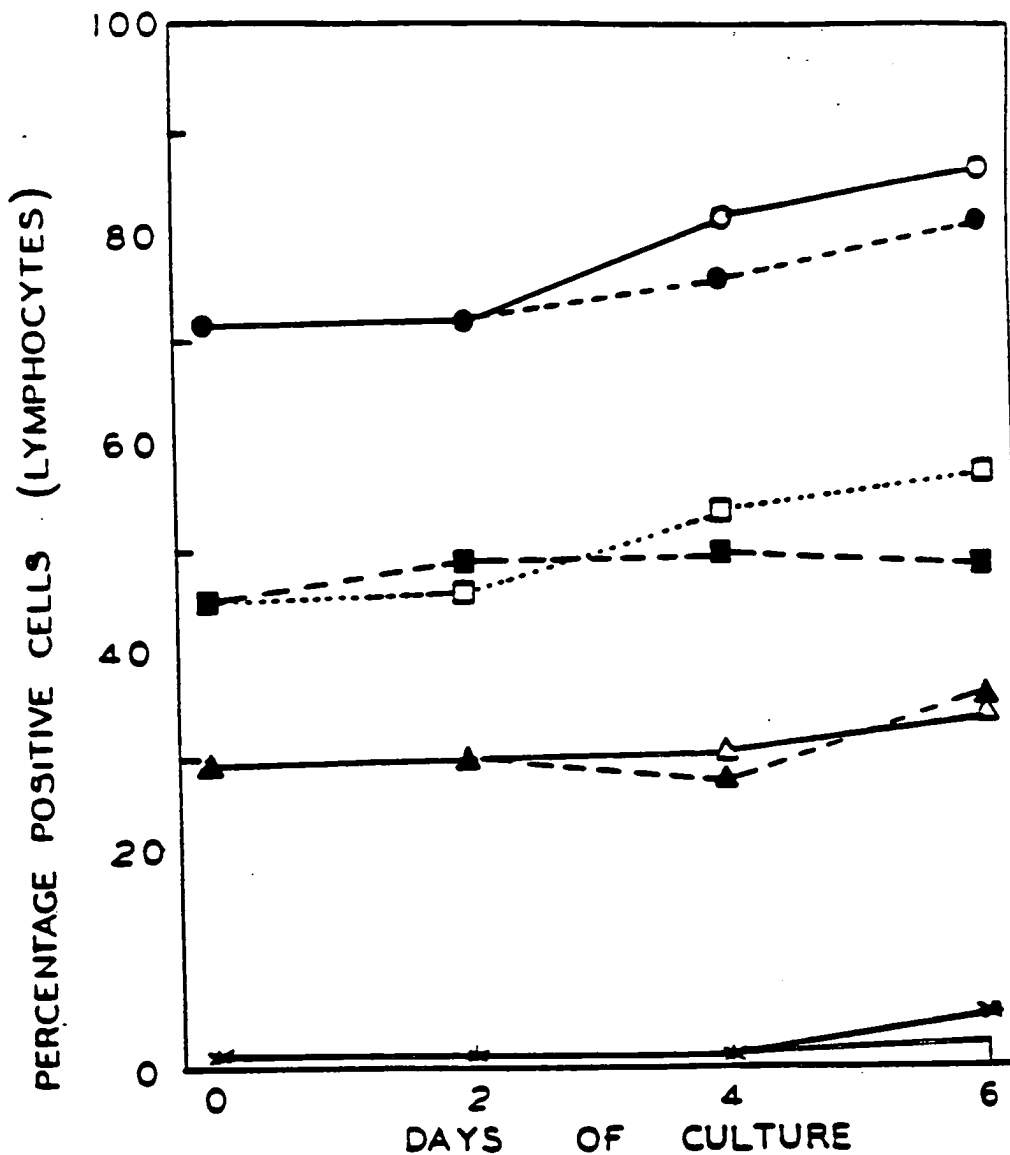


FIG. 4

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Effects of LO-CD2a on Resting Cells during MLC



CD3+ (-MoAb) CD3+ (-MoAb) CD4+ (-MoAb) CD4+ (-MoAb)
 —○— ---●--- ---□--- ---■---
 CD8+ (-MoAb) CD8+ (+MoAb) CD25+ (-MoAb) CD25+ (+MoAb)
 —△— ---▲--- —*— ———

FIG. 8A

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FIG. 5B

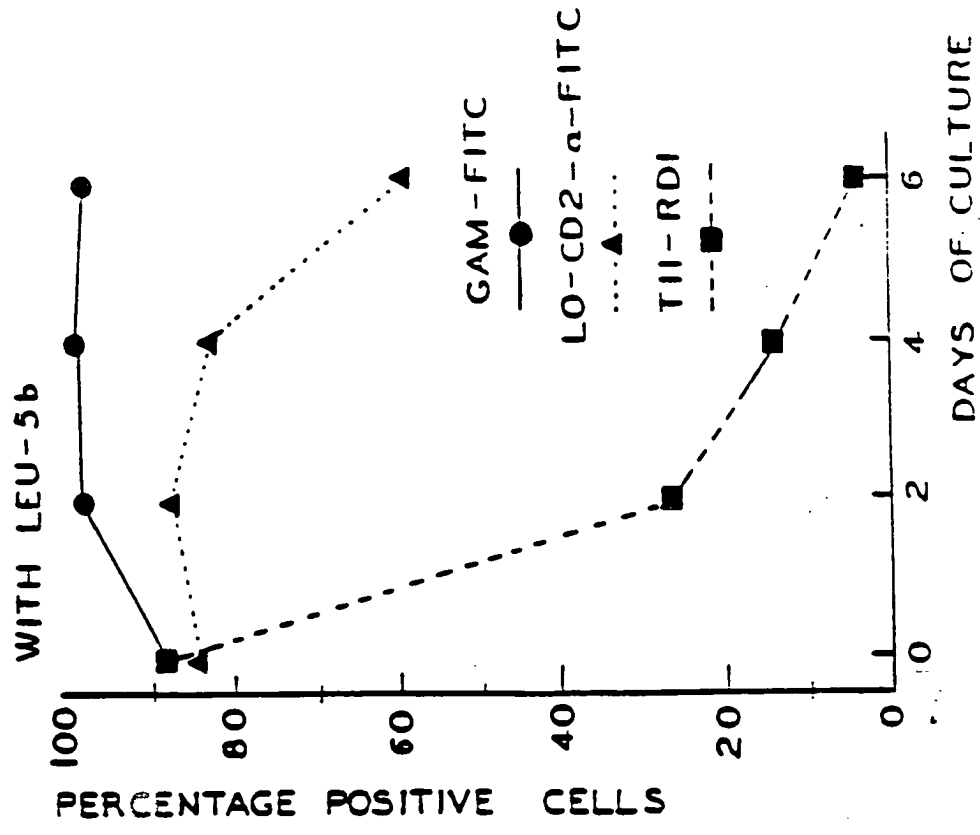
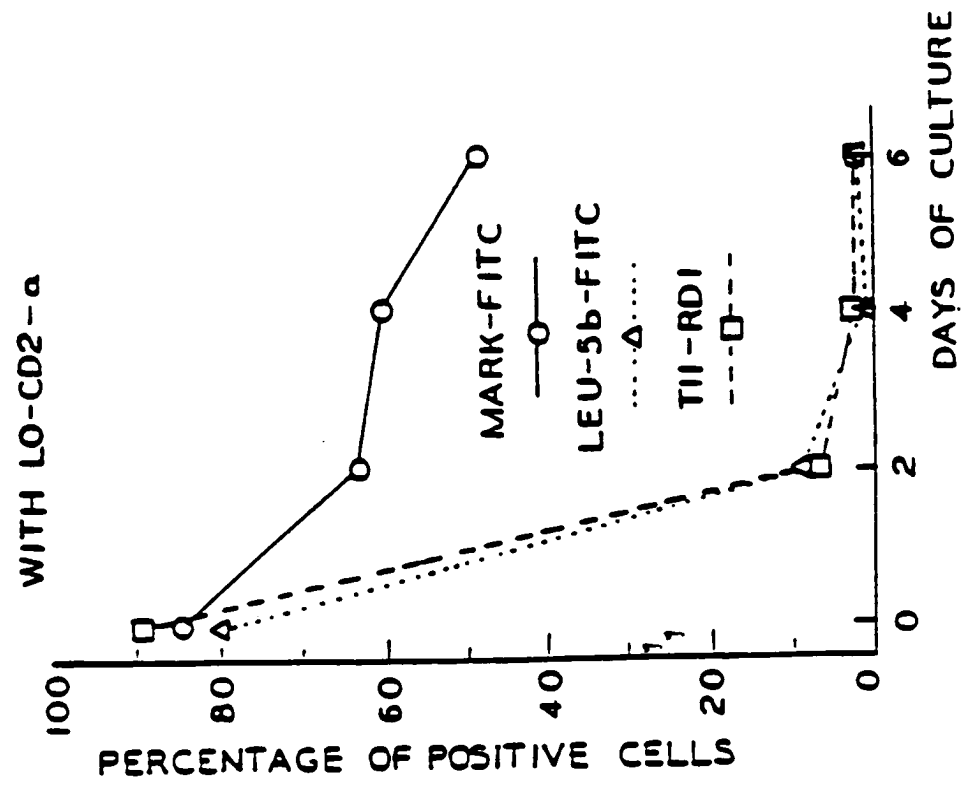


FIG. 5A



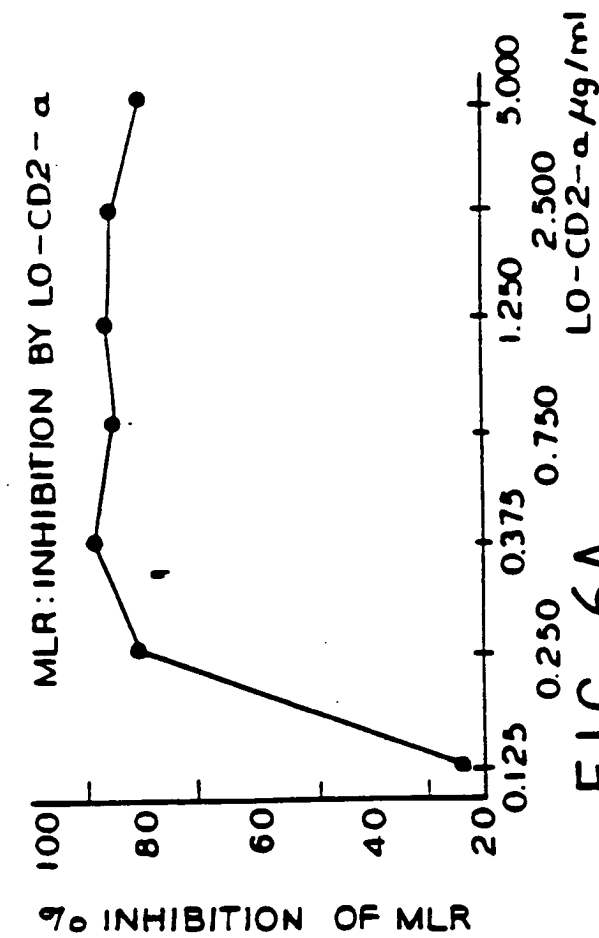


FIG. 6A

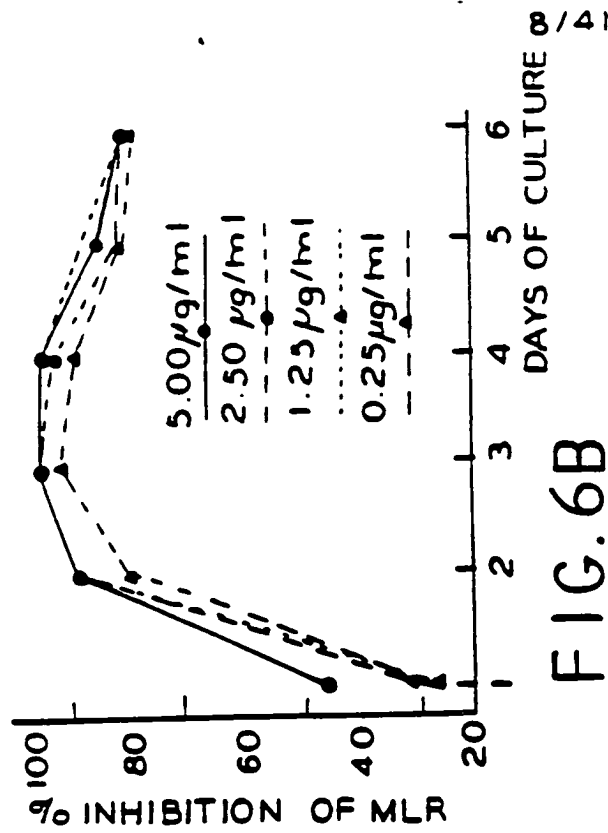


FIG. 6B

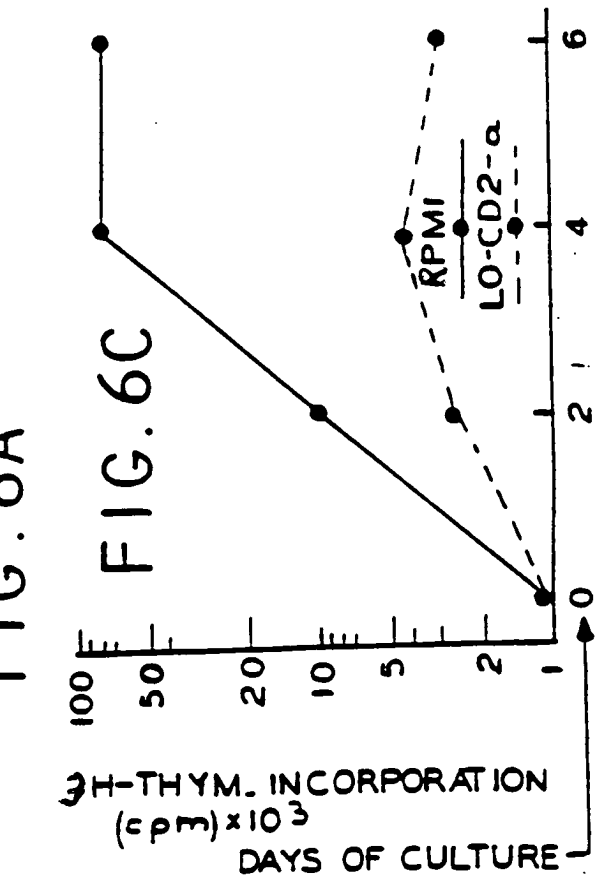


FIG. 6C

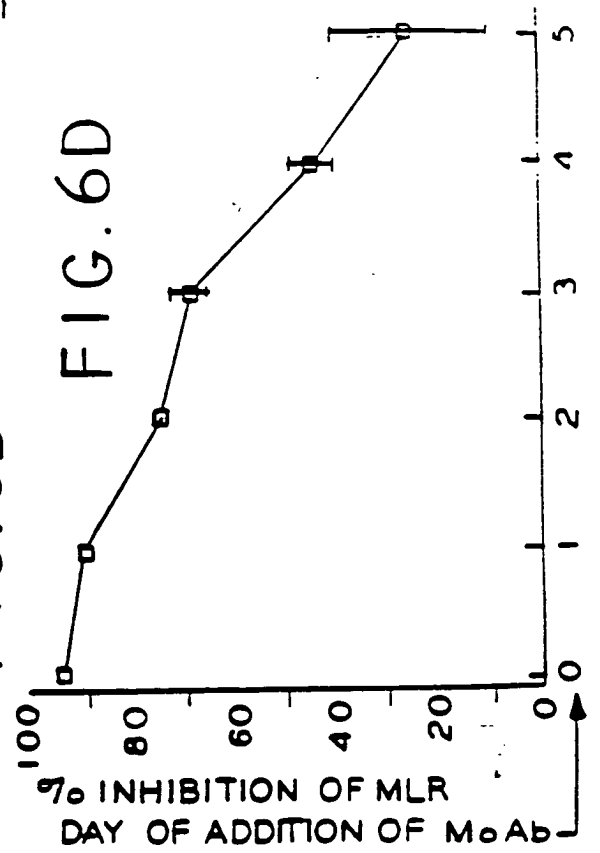


FIG. 6D

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MLC: LEU-5b+ (CD2+) CELLS

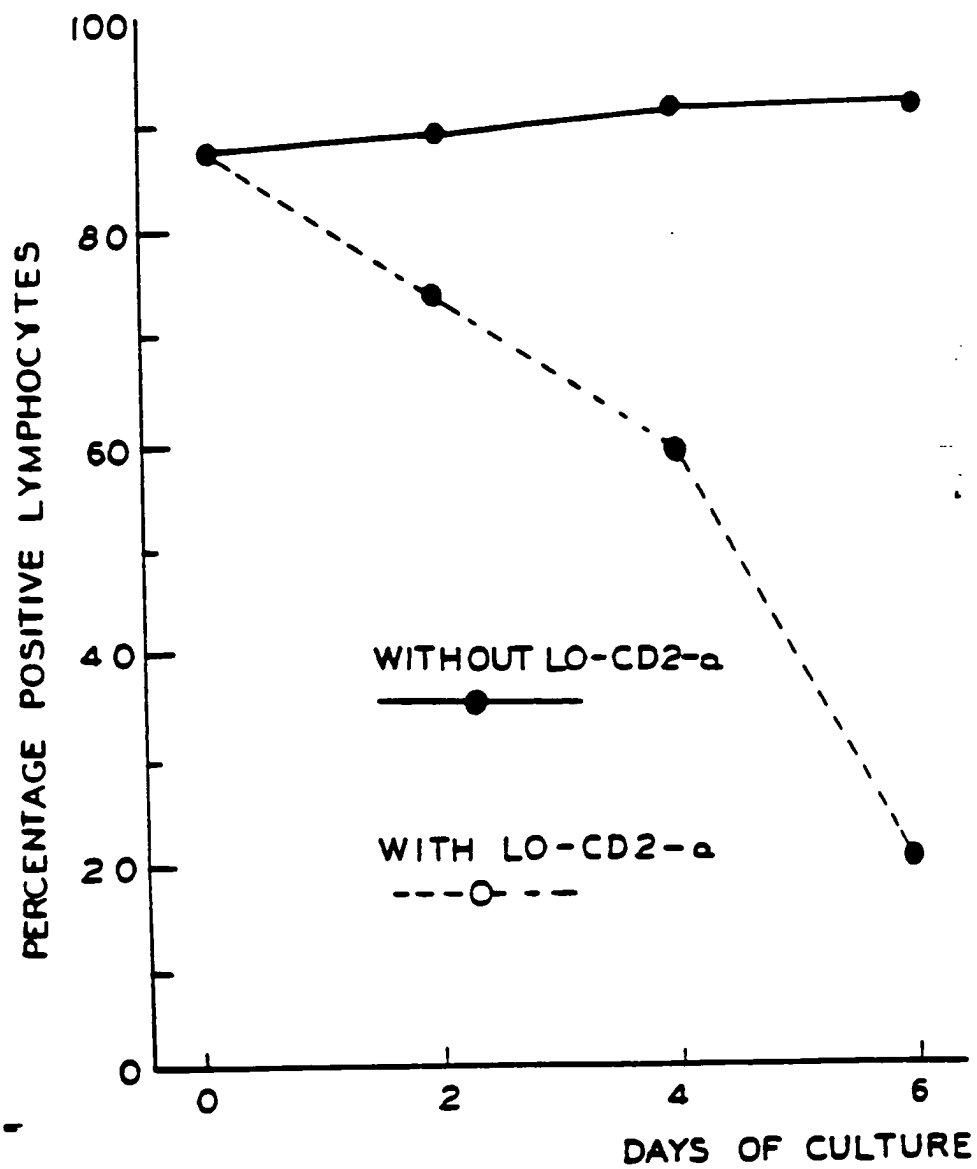


FIG. 8B

Number of blast cells per 25,000 events analyzed

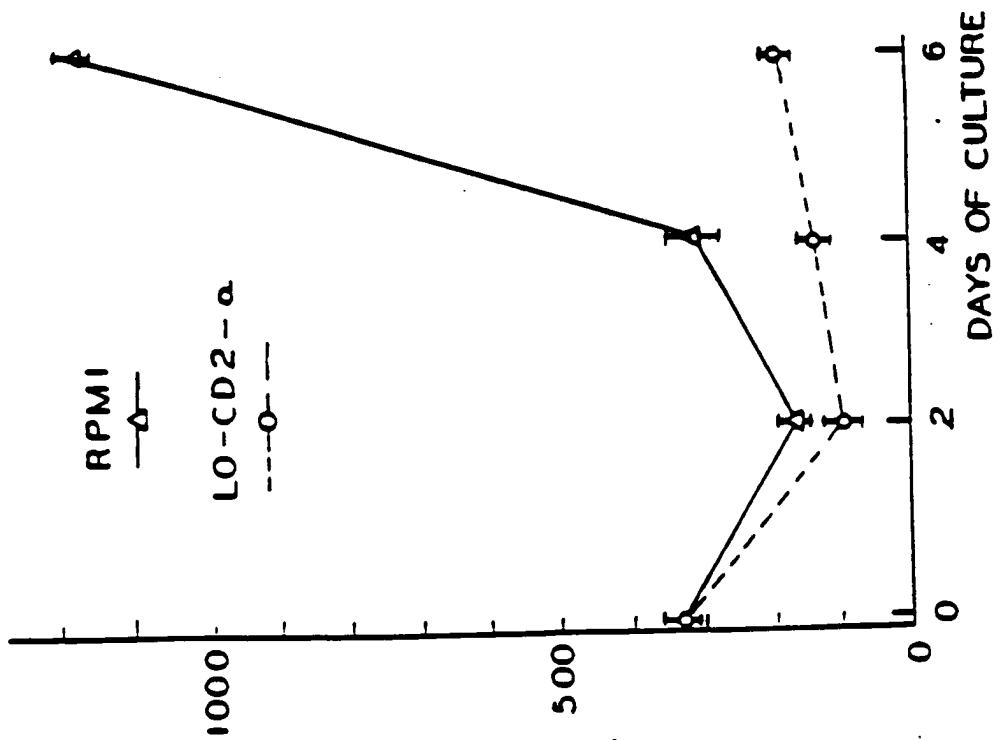


FIG. 7

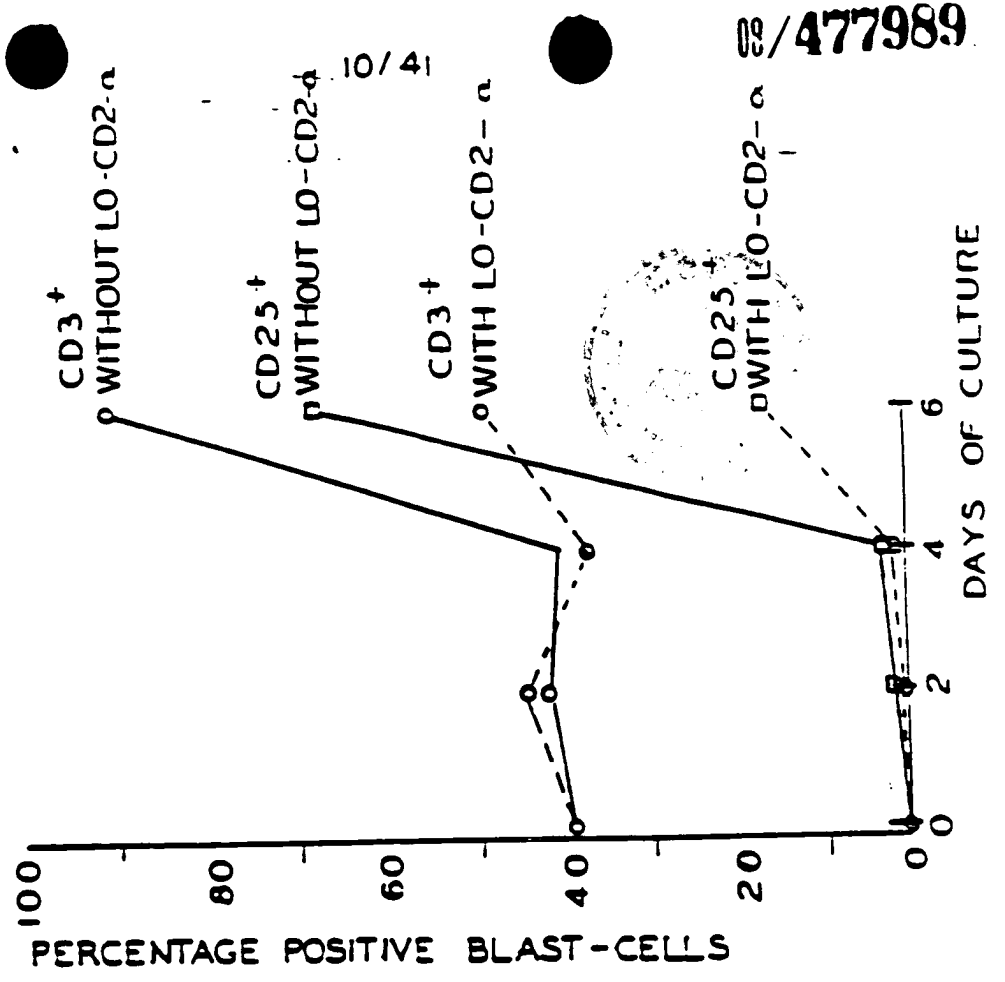
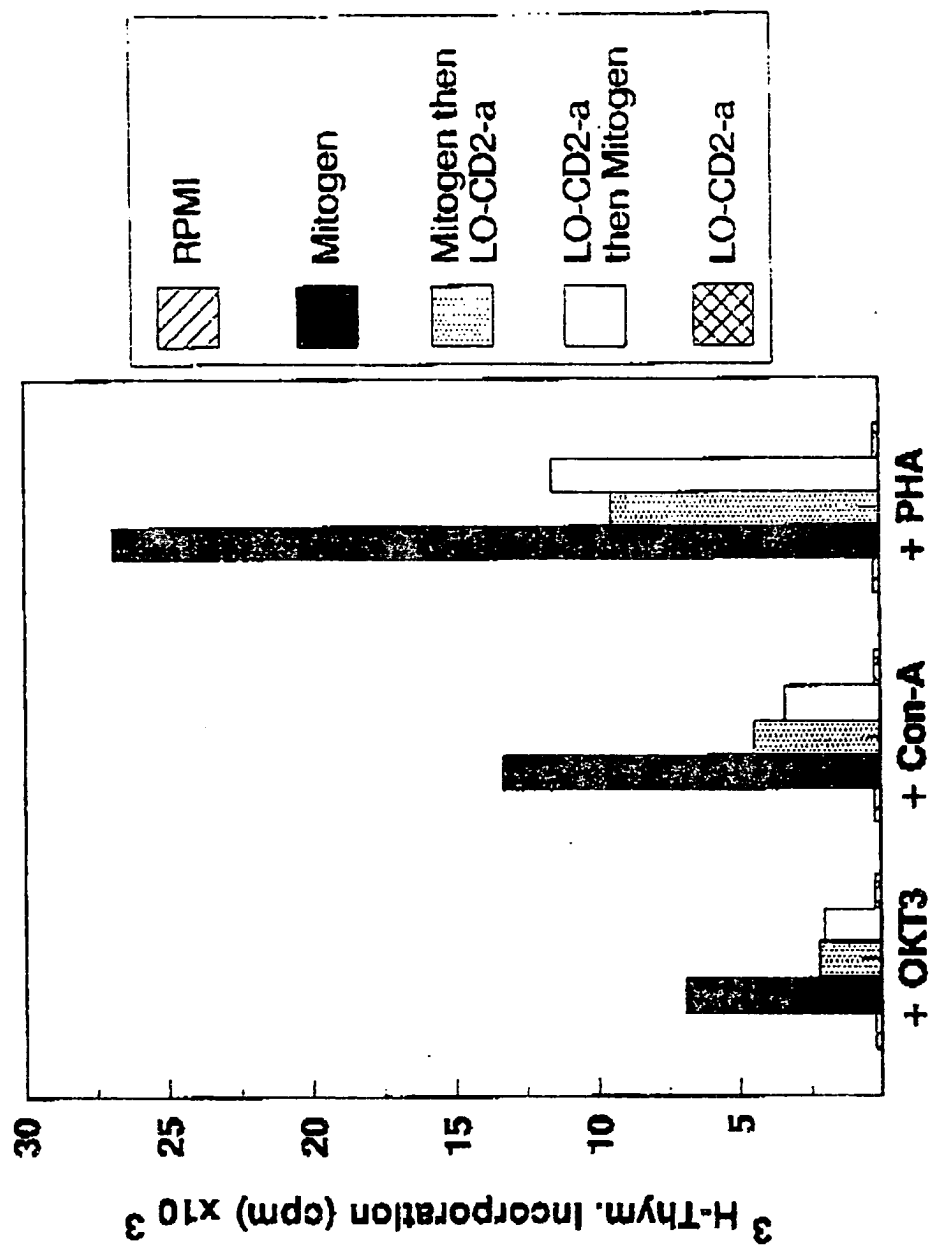
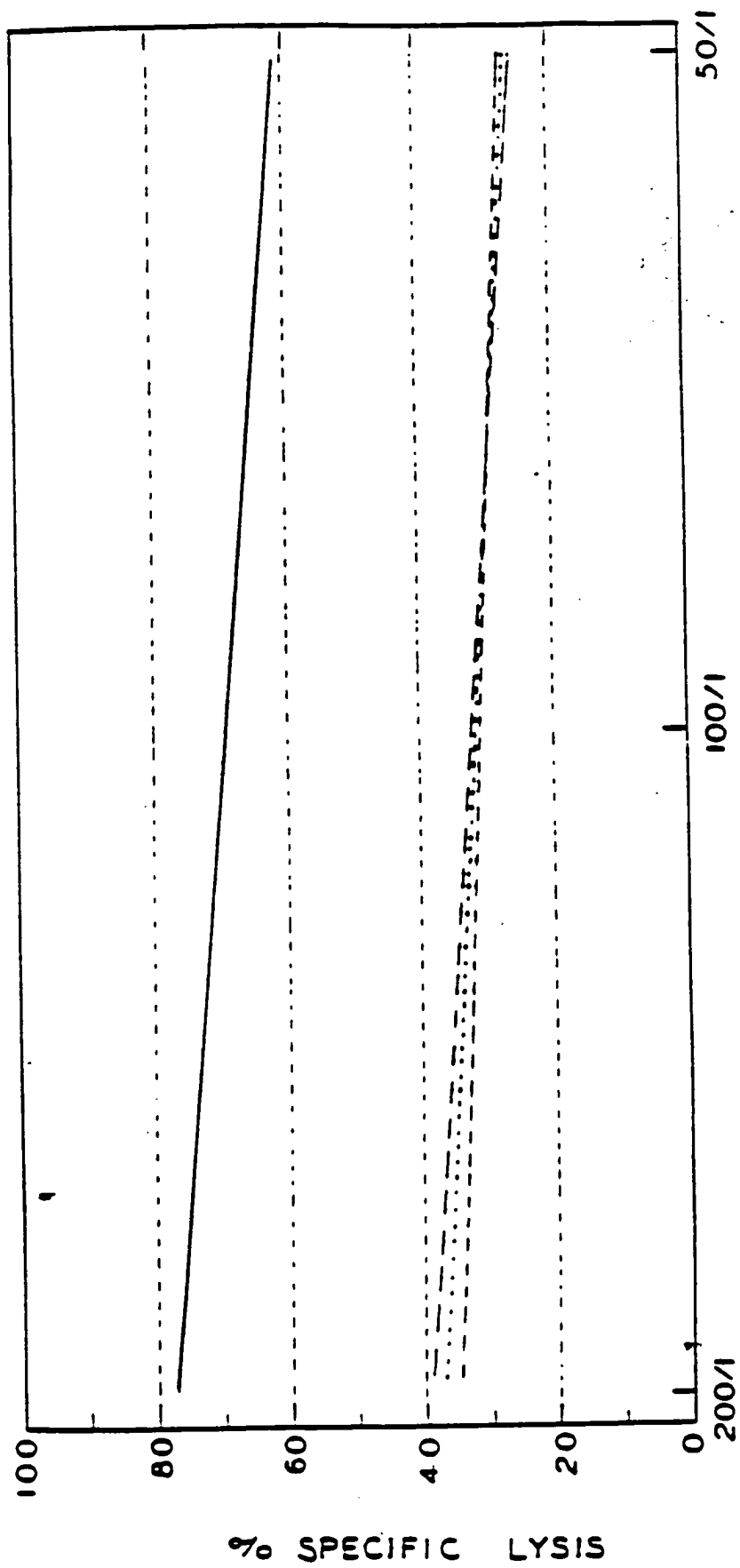


Figure 9

Effects of LO-CD2-a on mitogen-stimulated PBMC





FIC. 11 d

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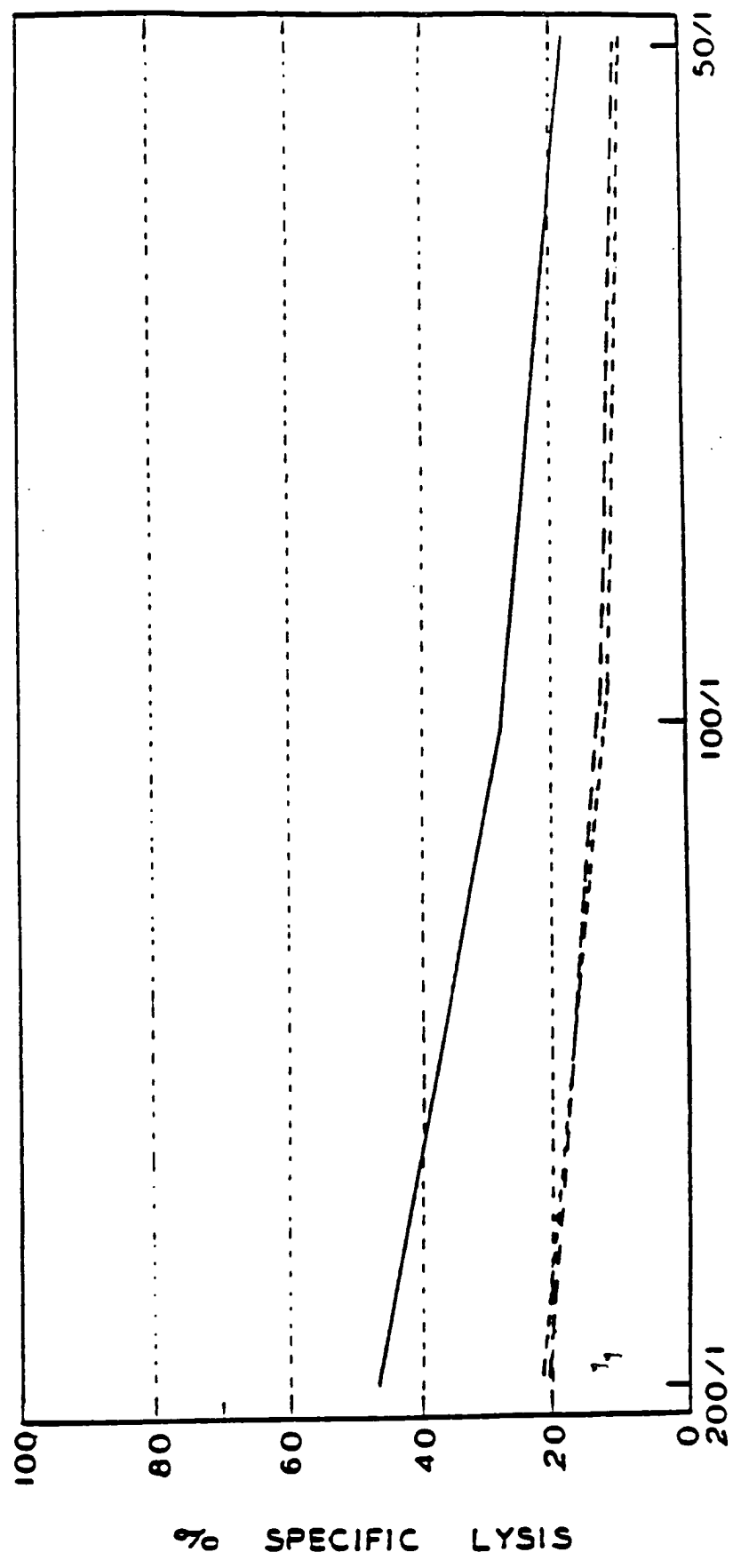


FIG. 11b

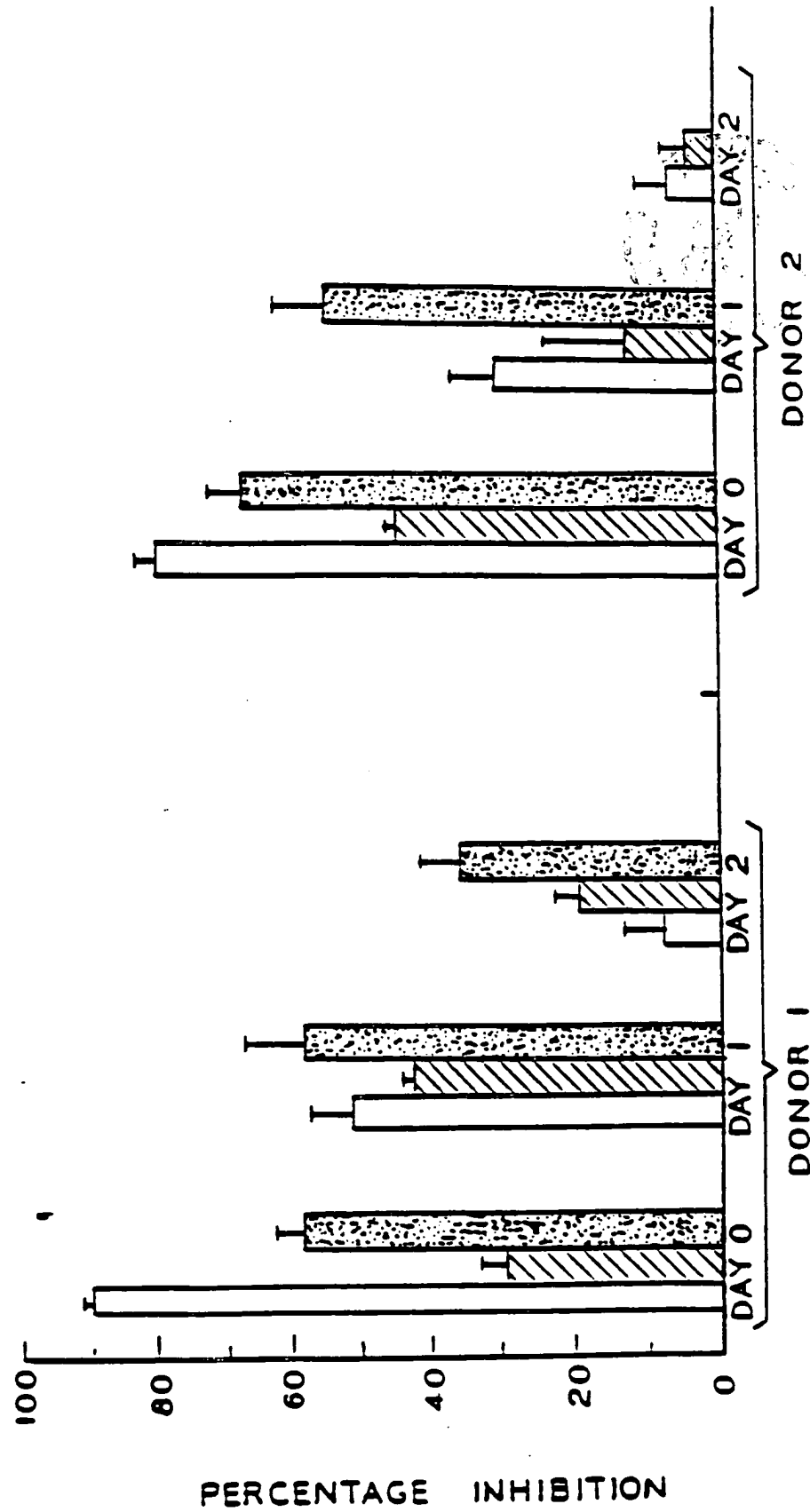


FIG. 10

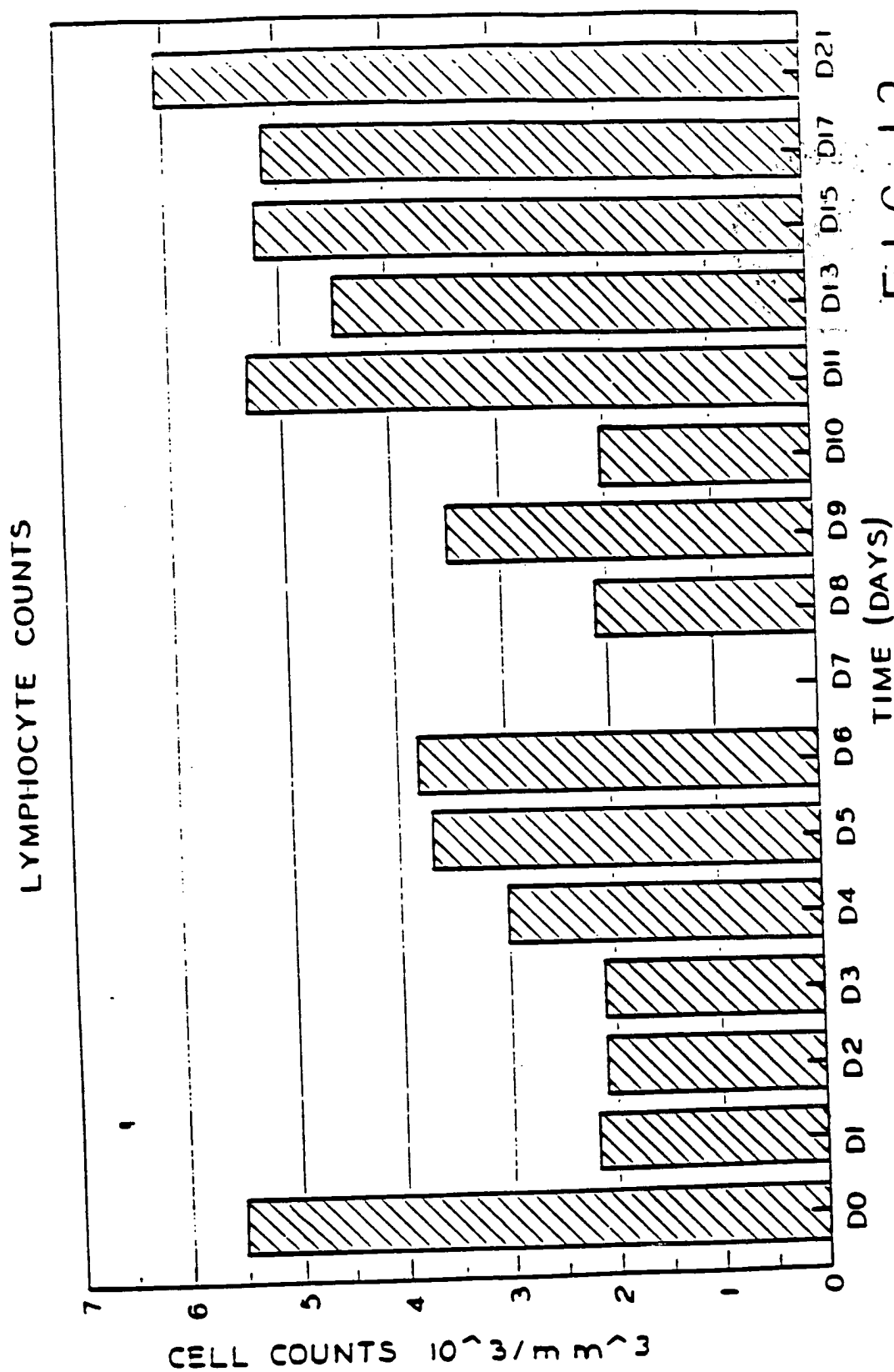


FIG. 12

LOCD2 20mg/DAY.
D0-D9

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CELL POPULATIONS FIG. 13
 LOCD2: 20 mg/DAY
 D0-D9

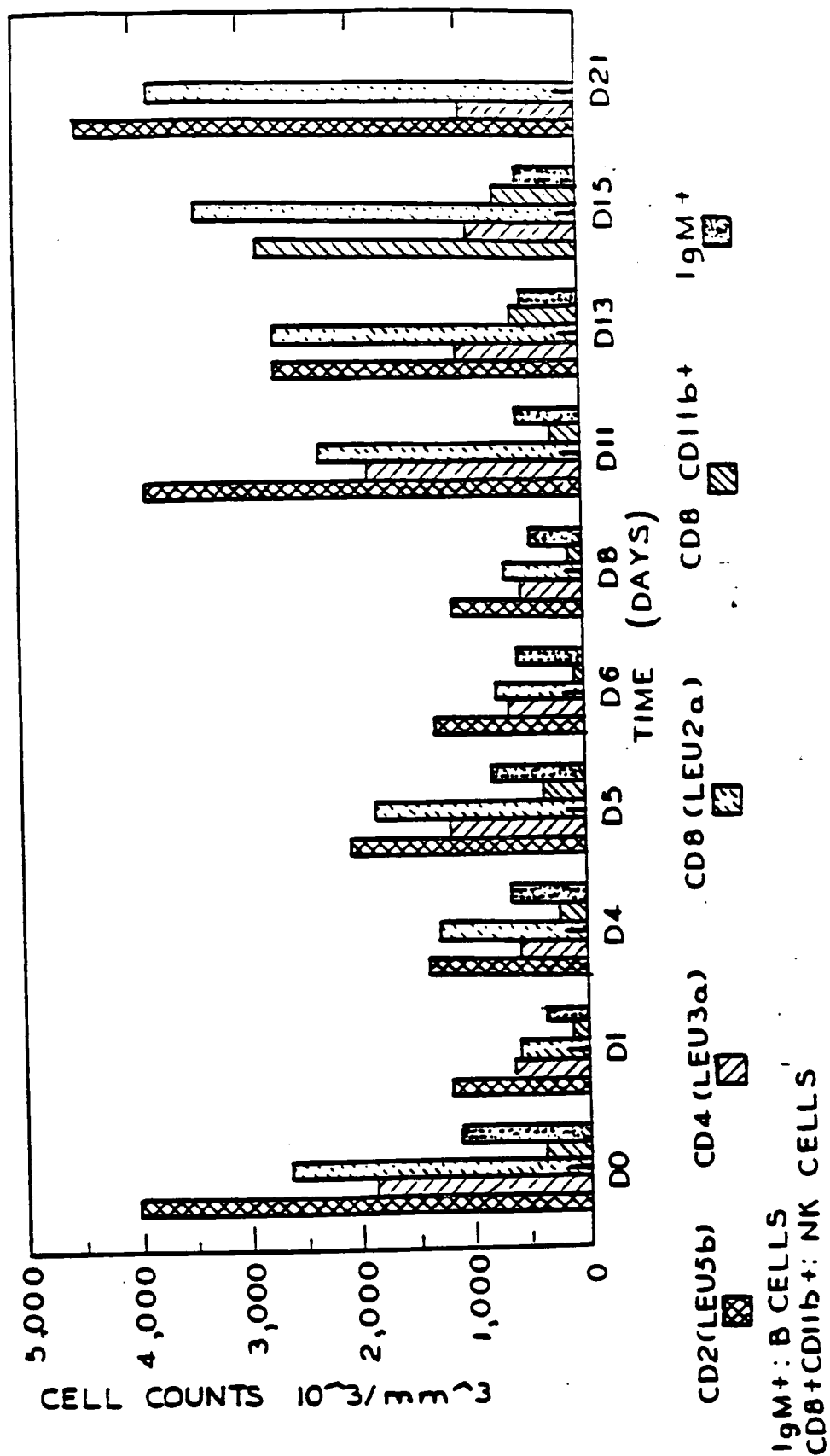
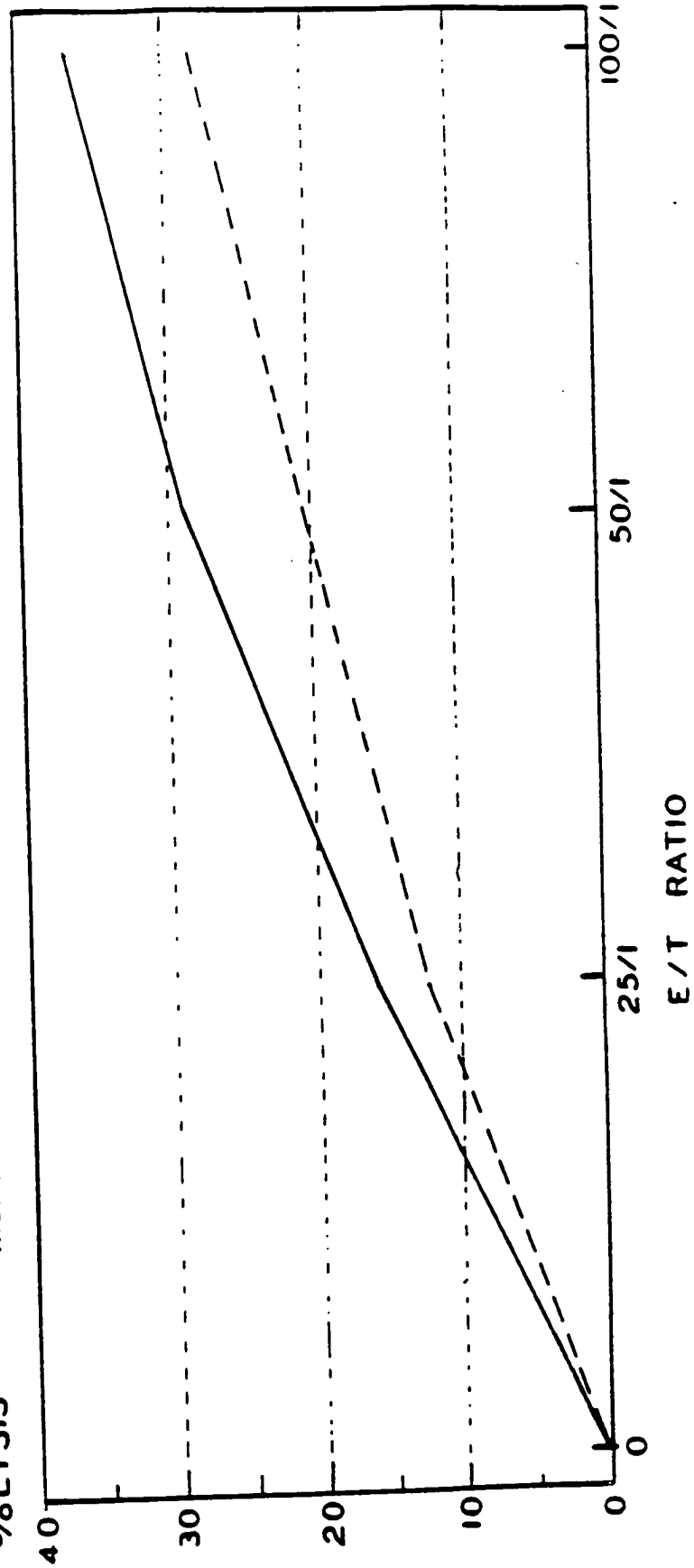


FIG. 14

NK ACTIVITY

MONKEY #1992 AFTER LOCD2 10 DAYS

%LYSIS



DAY 11

DAY 22

LOCD2- α SERUM CONCENTRATION
CYNOMOLGUS MONKEY 1992

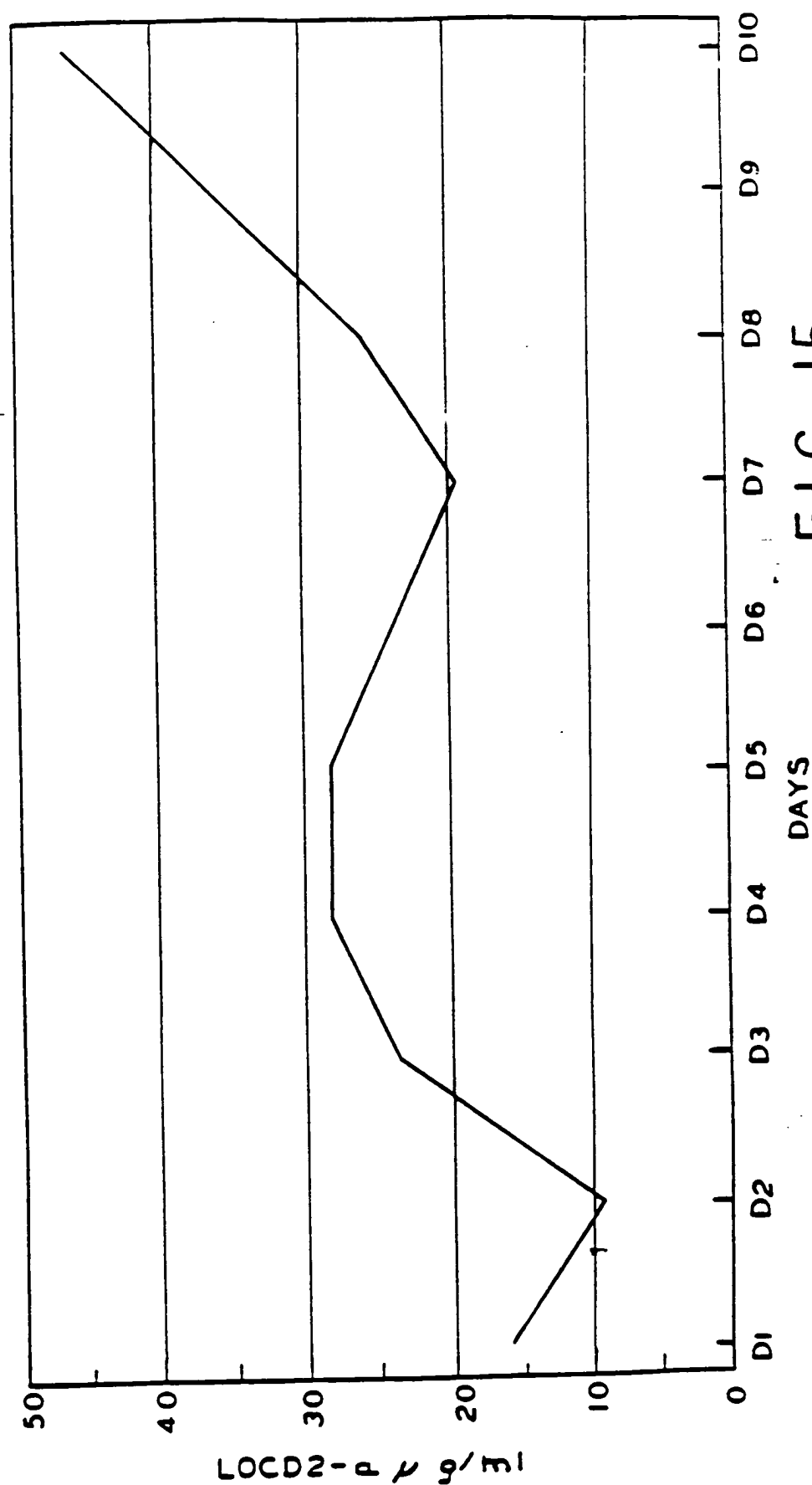


FIG. 15

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FIG. 16

19G ANTIBODY ANTI-LOCD2a
CYNOMOLGUS MONKEY

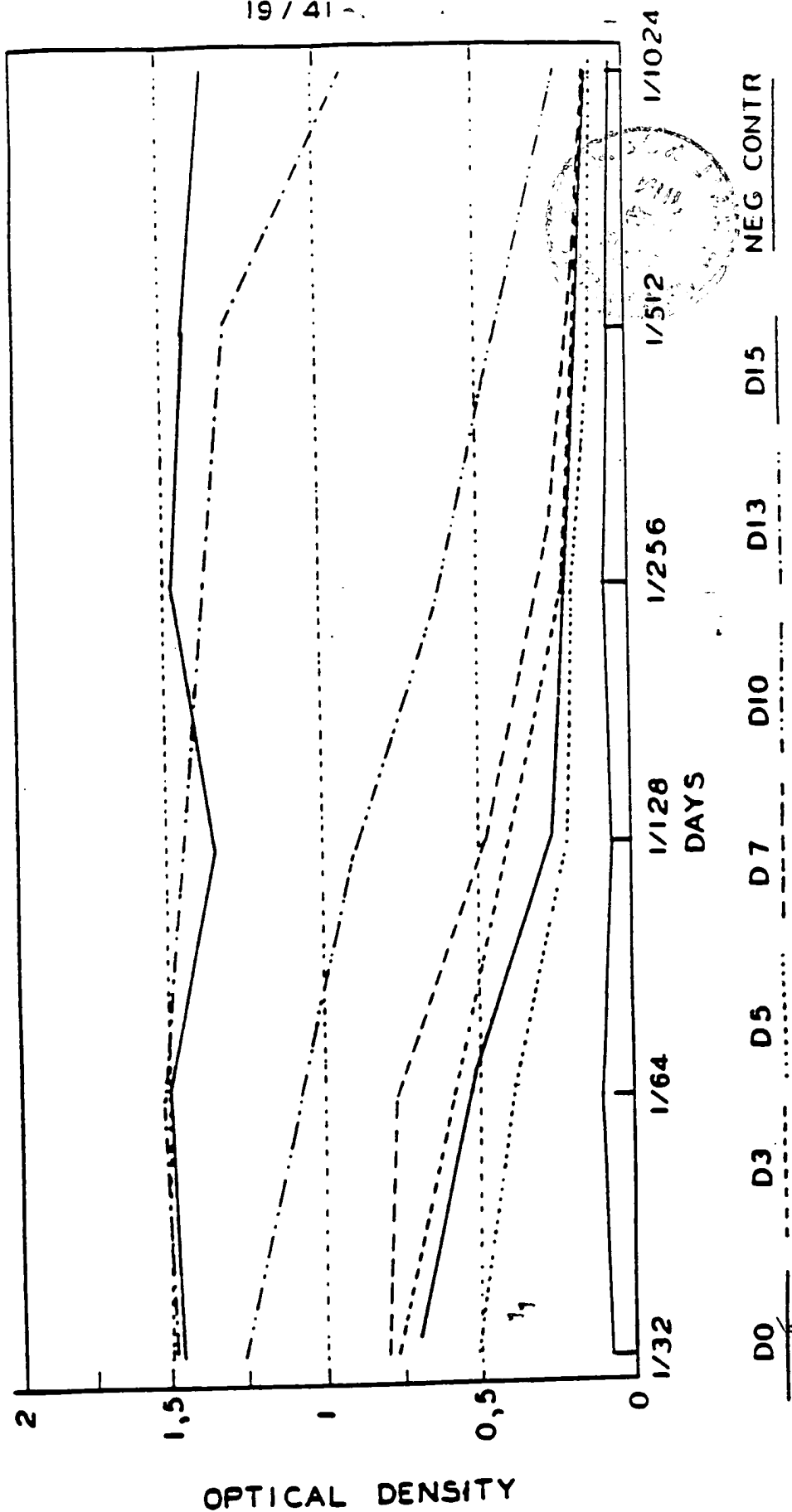


FIG. 17B
LO-CD2- α : SERIC DOSAGES

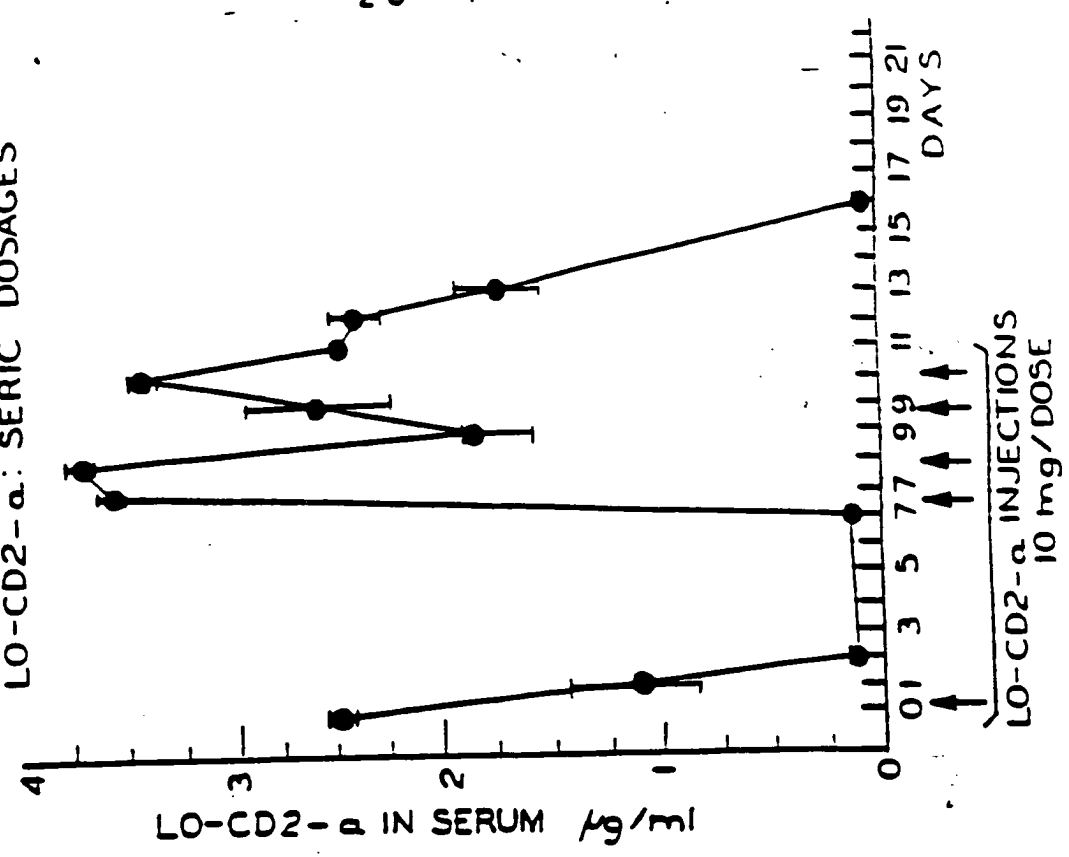


FIG. 17A
PHENOTYPICAL MARKERS

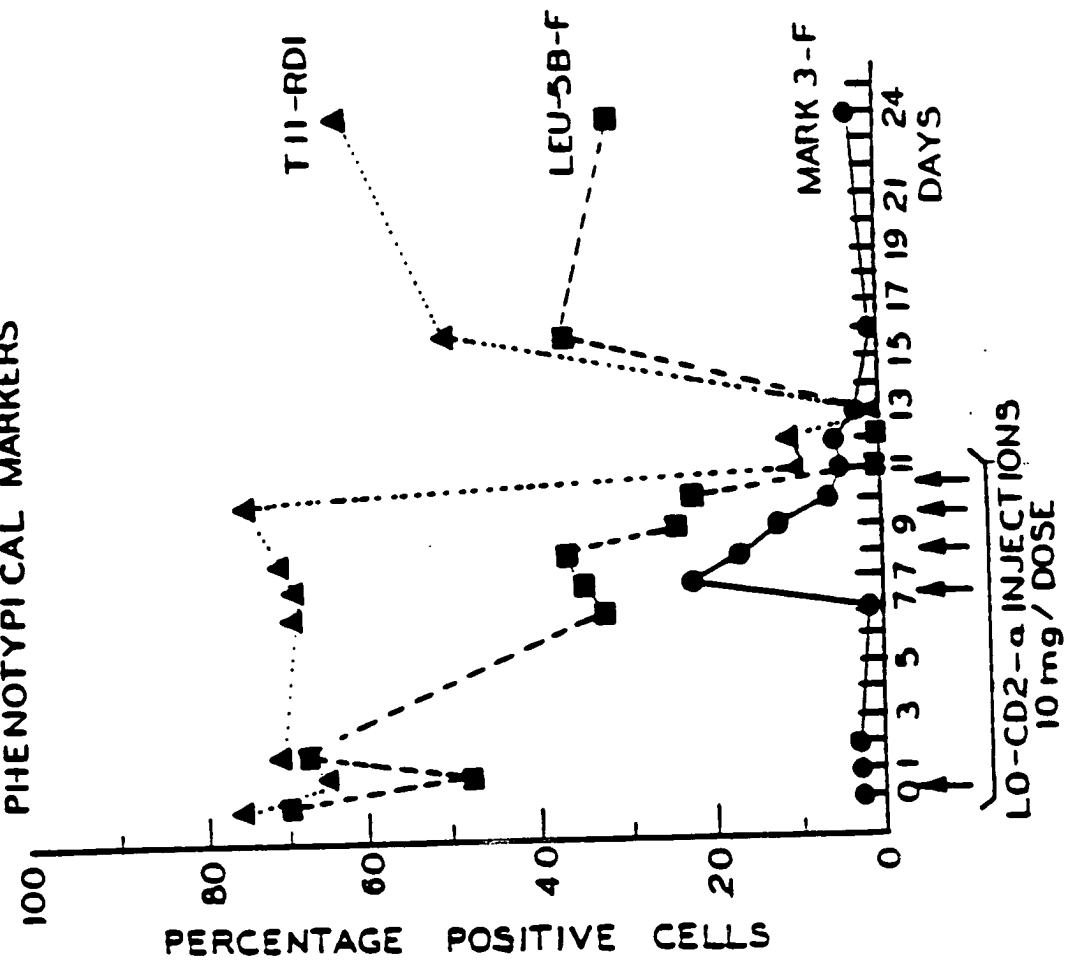


FIG. 18B

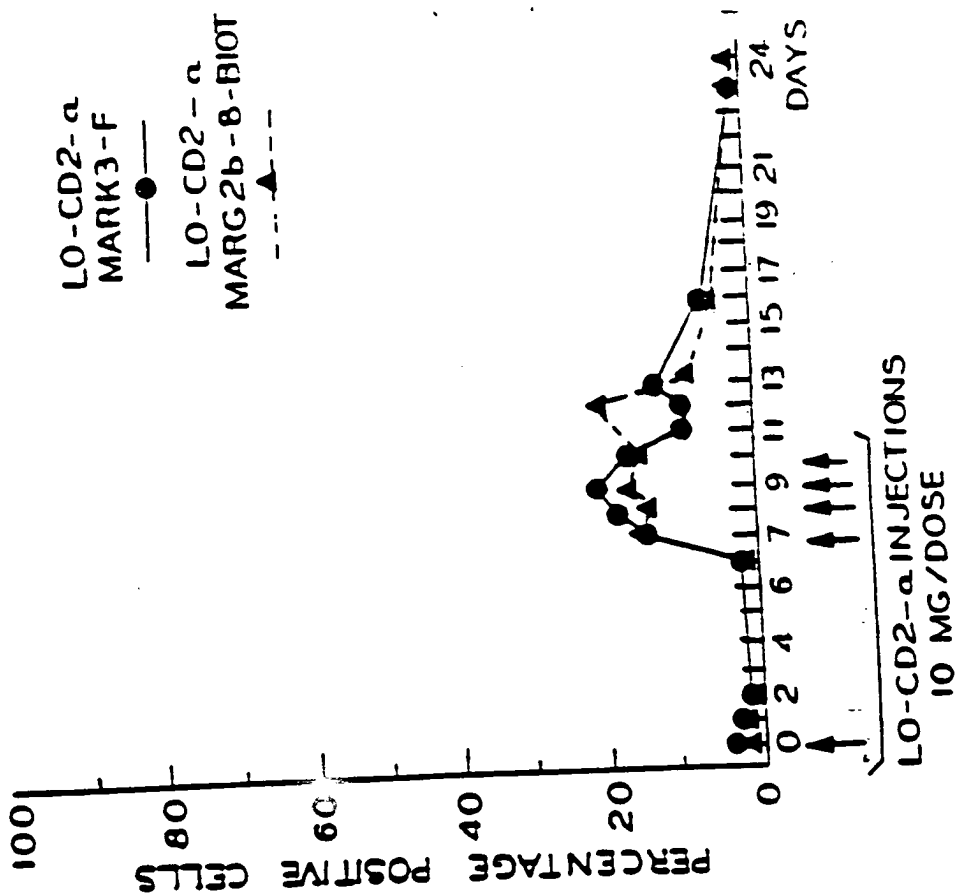
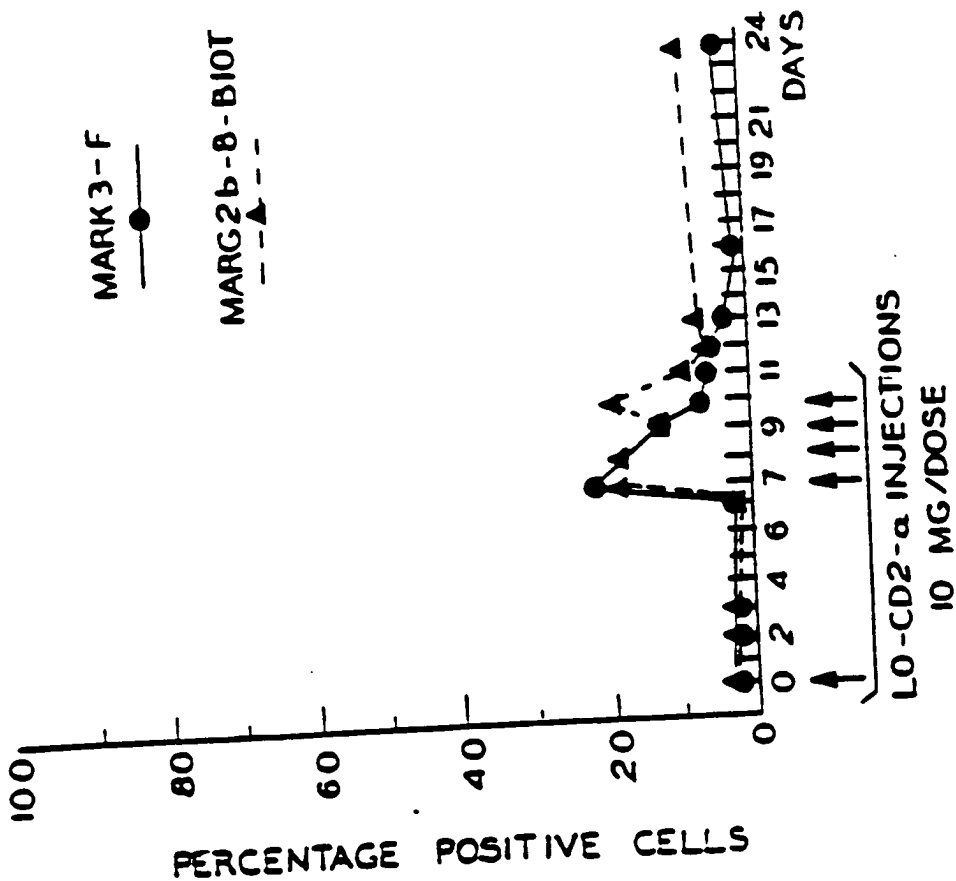
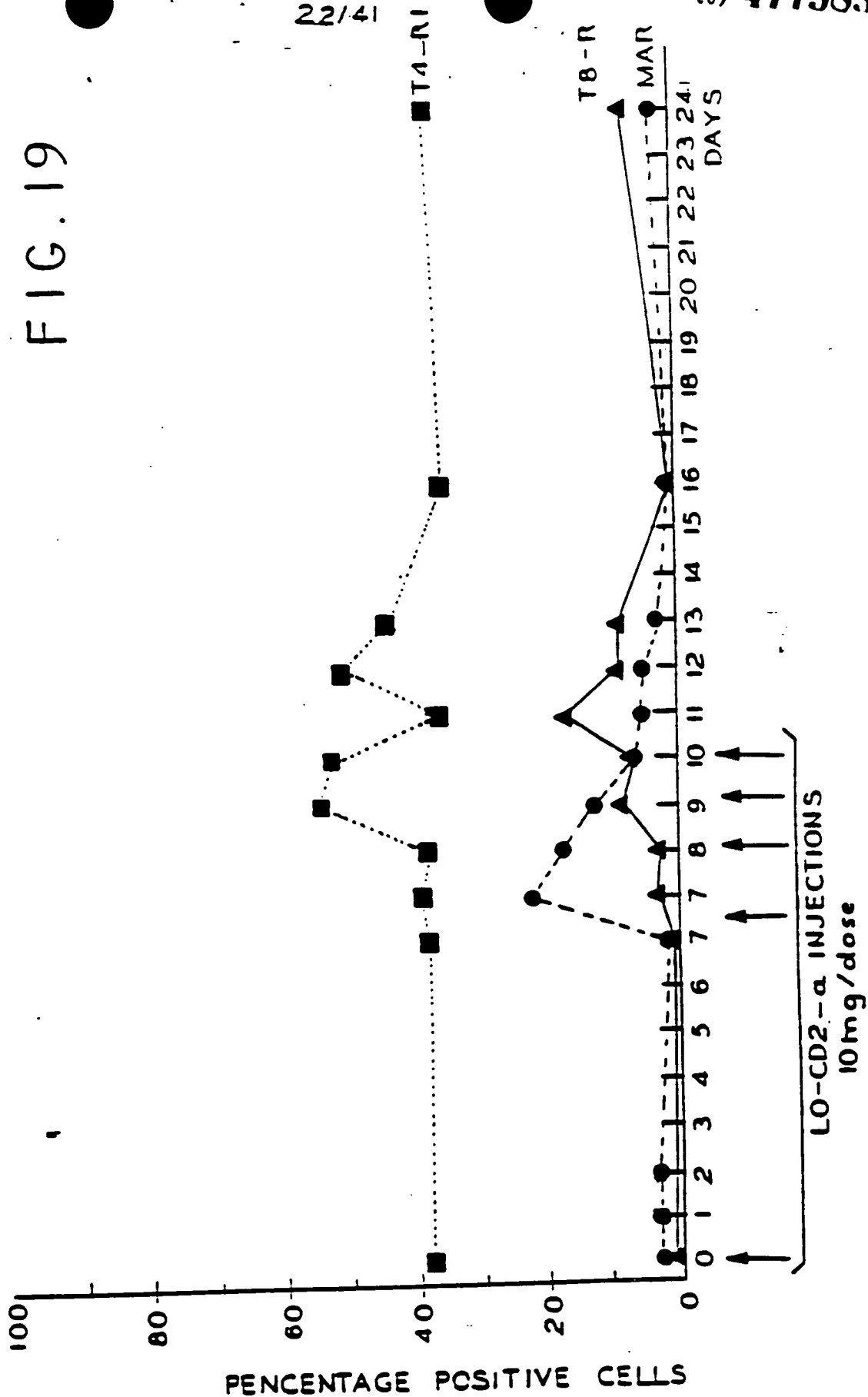


FIG. 18A

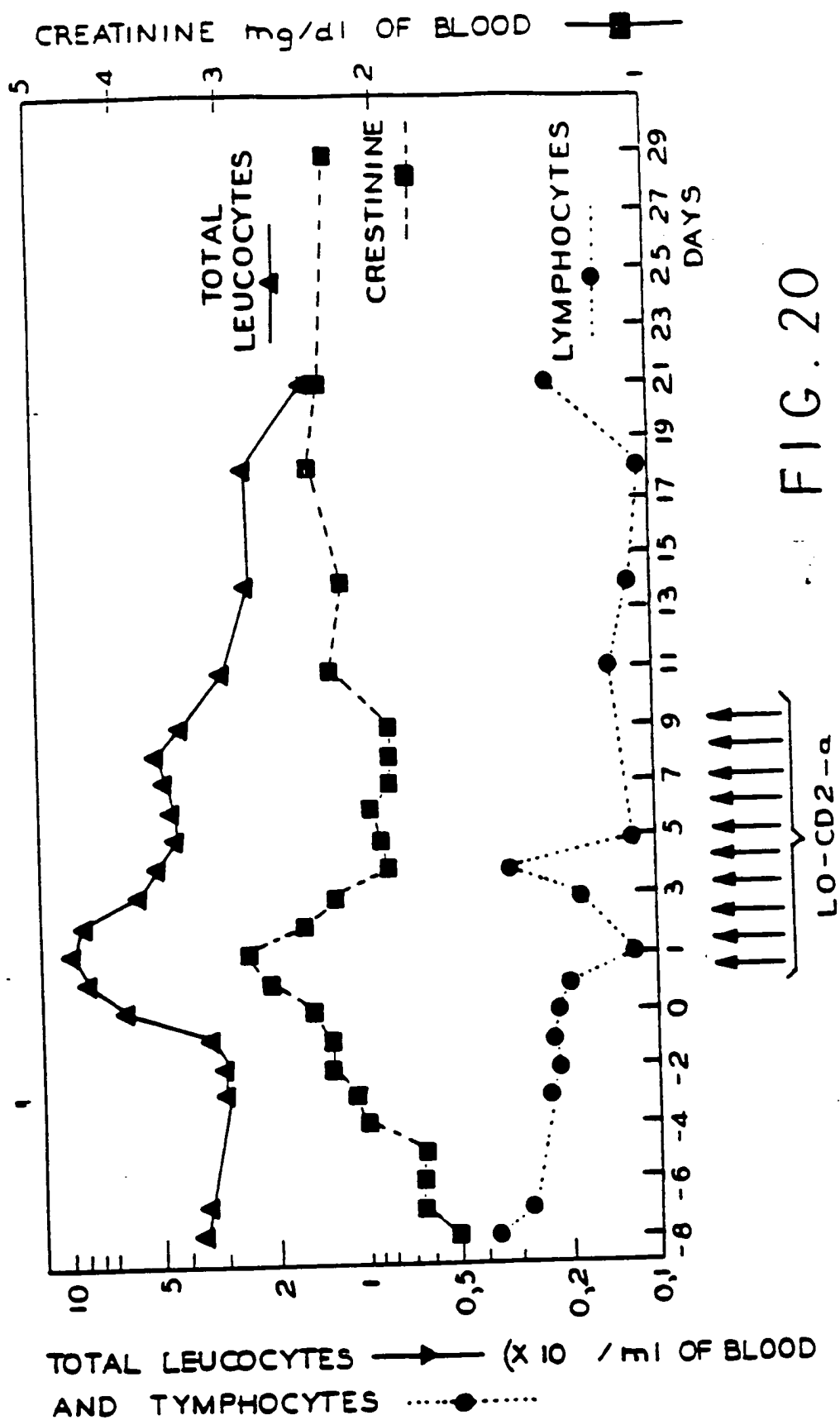


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FIG. 19



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LO-CD2- α IN KIDNEY ALLOGRAFT REJECTION

FIG. 21

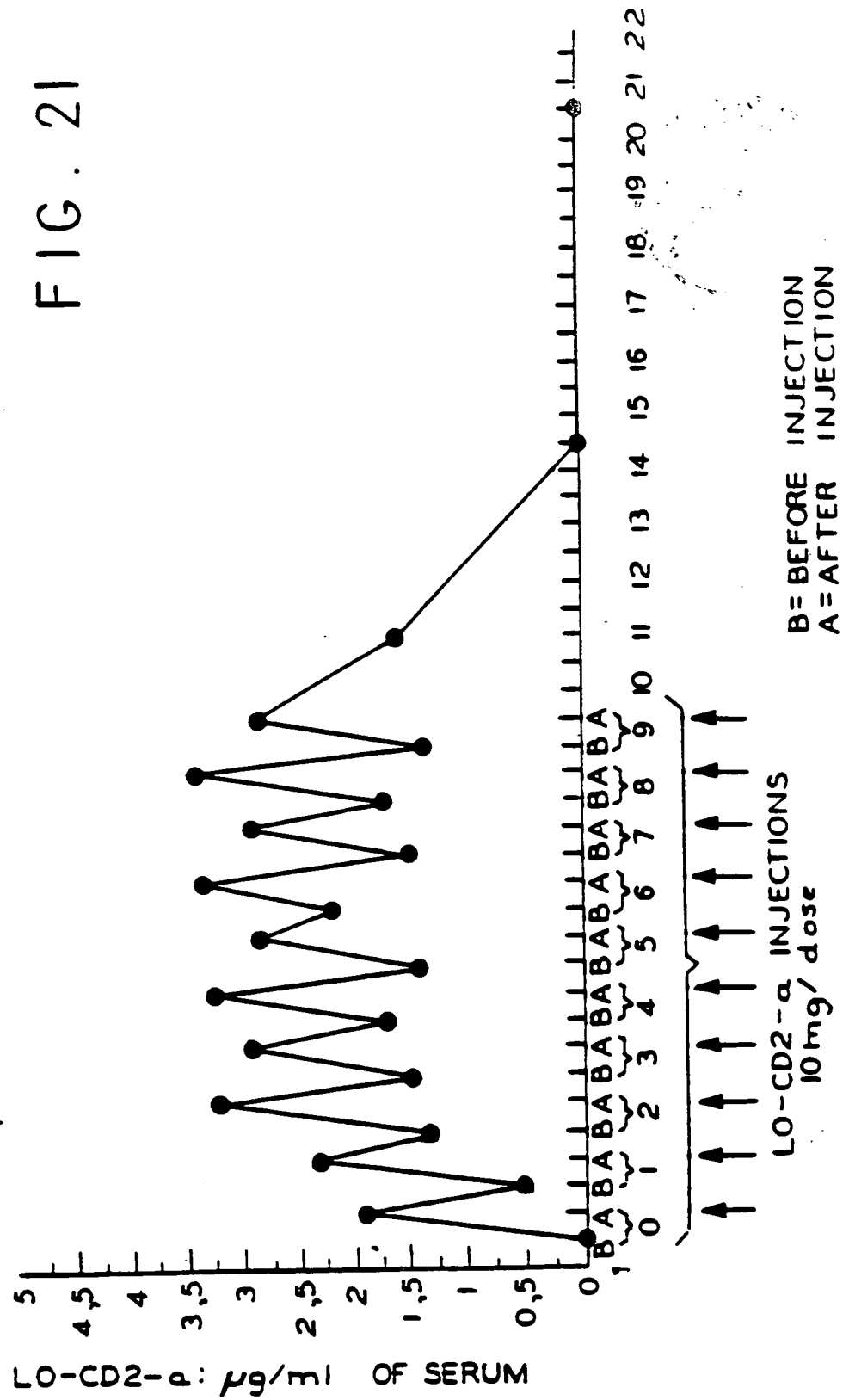


FIG. 22

CREATININ VALUES
PATIENT 2 AR.A.

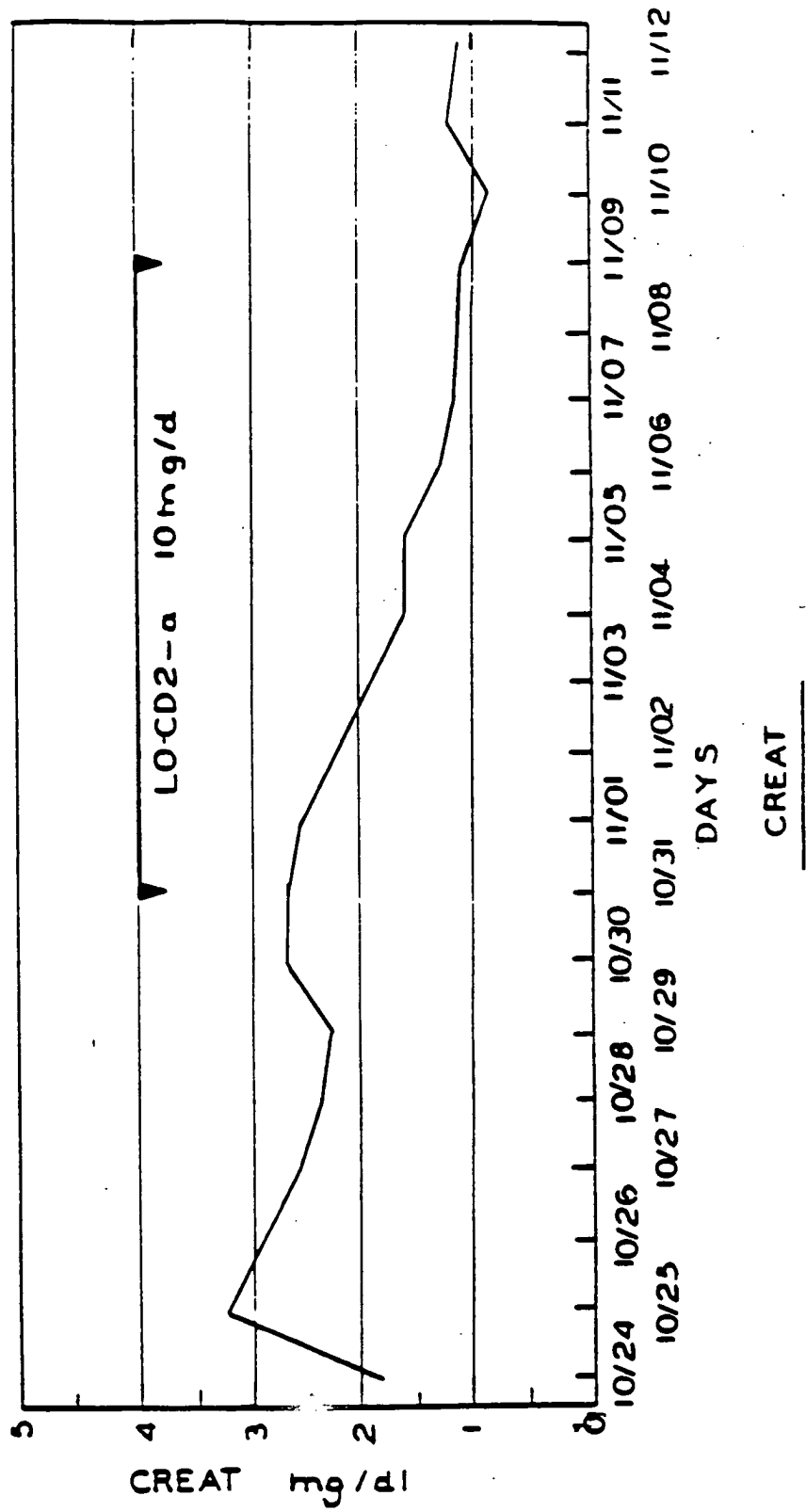
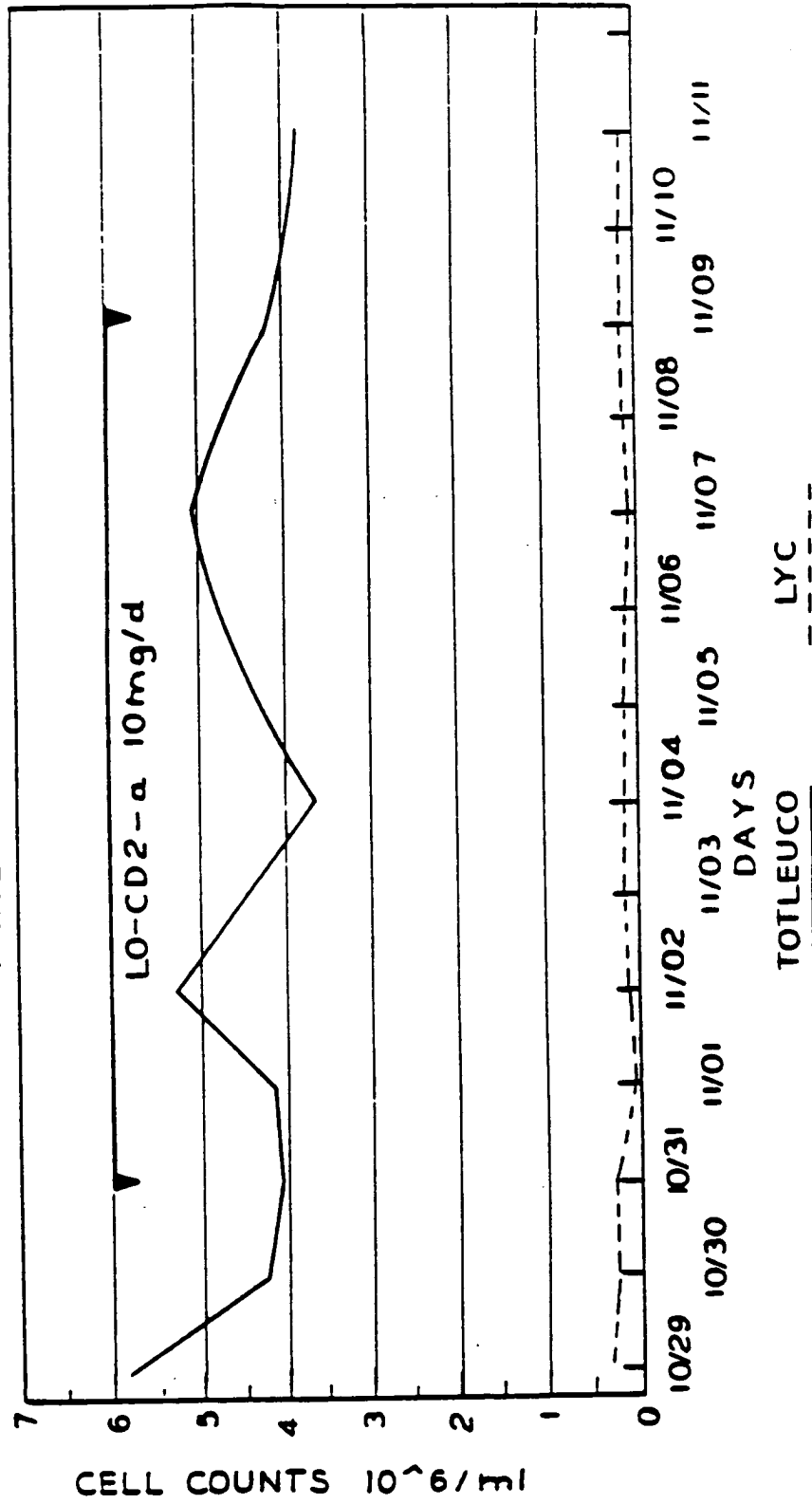


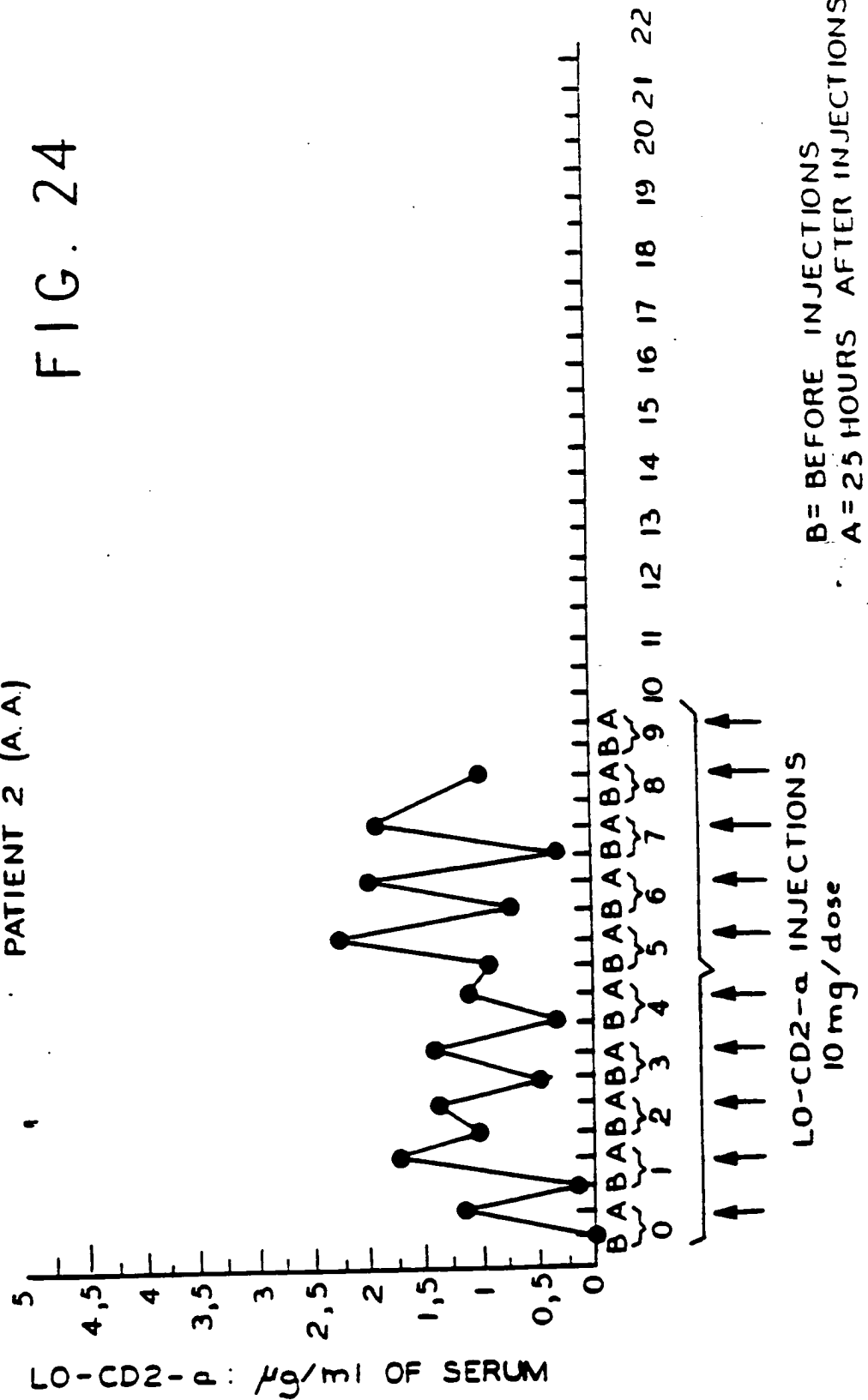
FIG. 23

LEUCOCYTE COUNTS
PATIENT 2 AR.A.



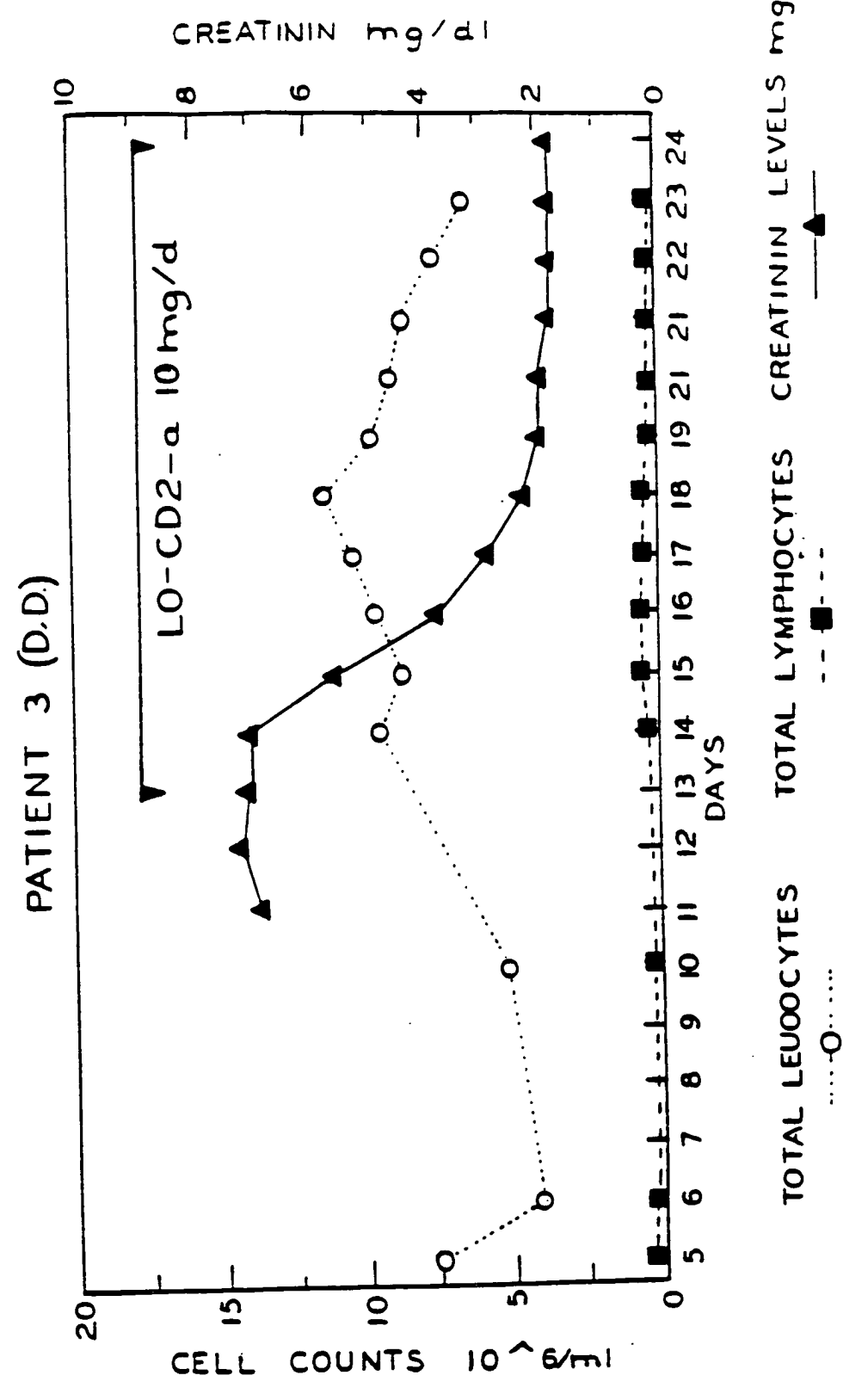
LO-CD2- α IN KIDNEY ALLOGRAFT REJECTION
PATIENT 2 (A.A.)

FIG. 24



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FIG. 25



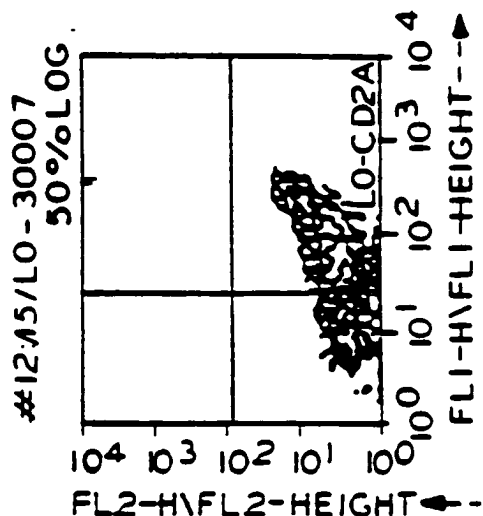


FIG. 26A

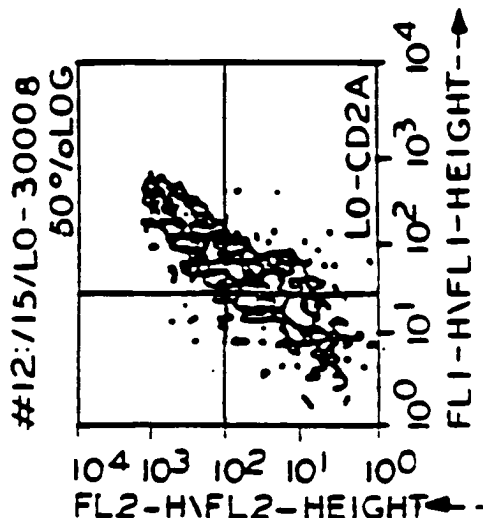


FIG. 26B

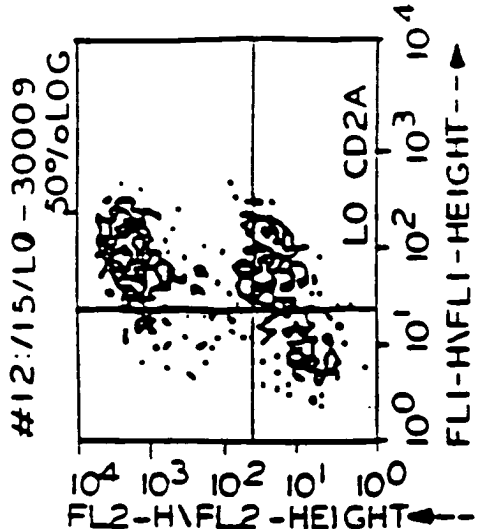


FIG. 26C

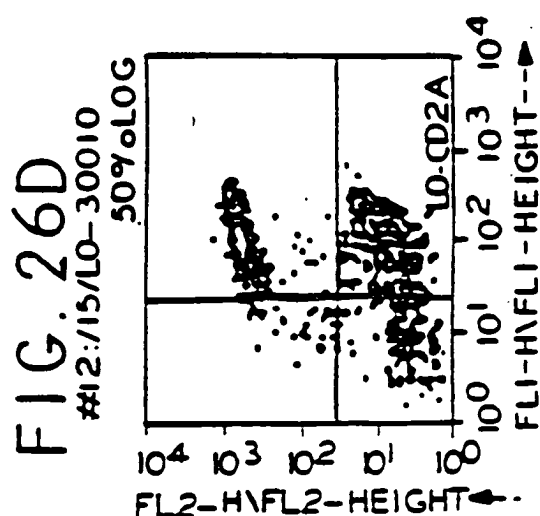


FIG. 26D

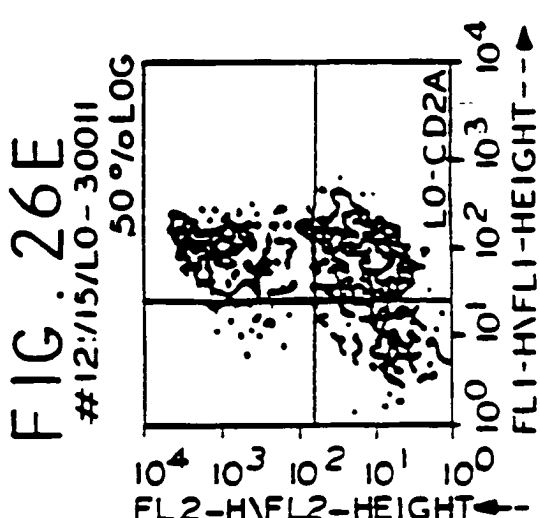


FIG. 26E

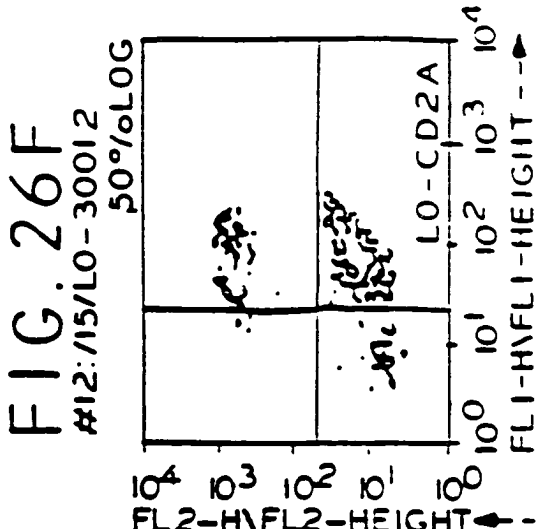


FIG. 26F

SINGLE STAINED CONTROLS

SINGLE STAINED CONTROLS

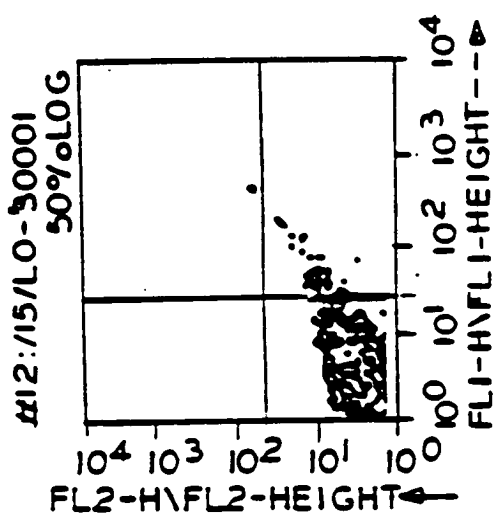


FIG. 26J

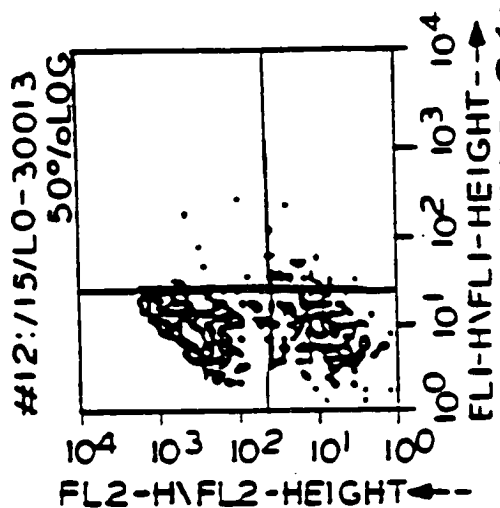
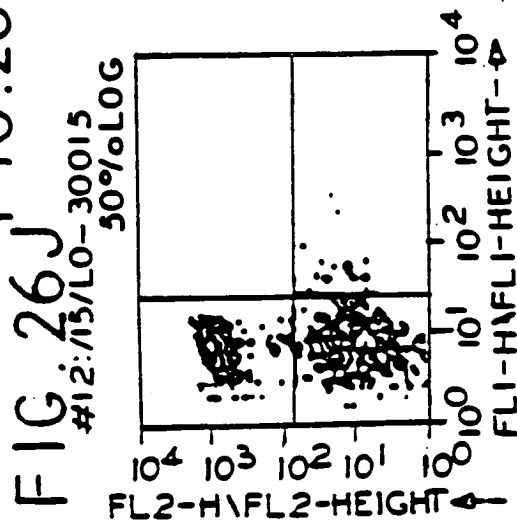


FIG. 26K

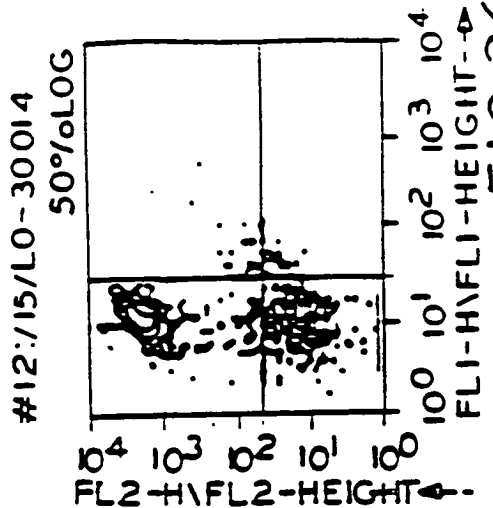
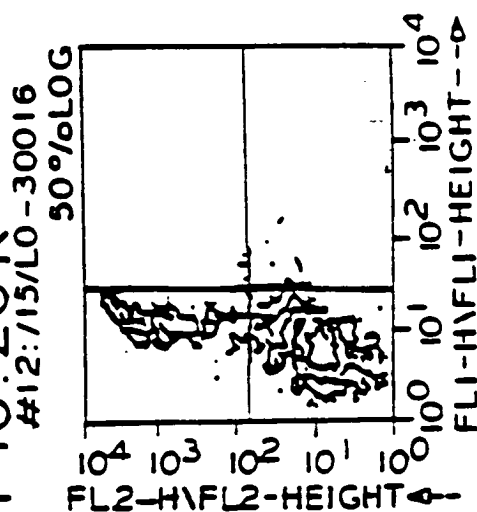


FIG. 26L

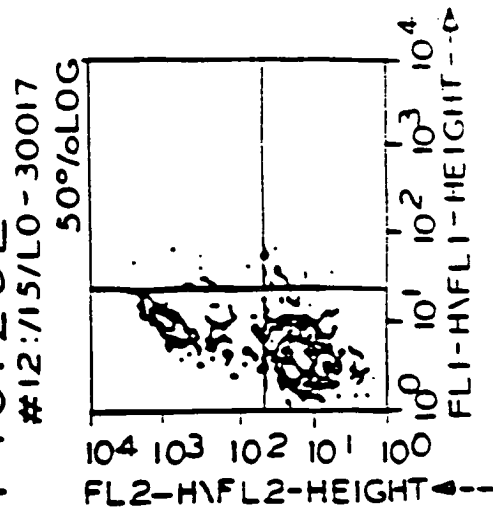


FIG. 26H

FIG. 26I

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FIG. 27A

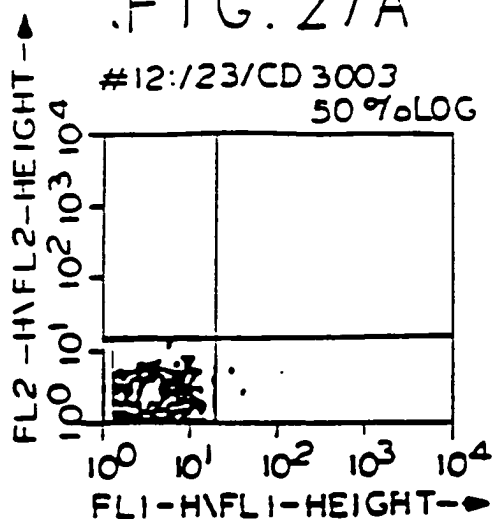


FIG. 27B

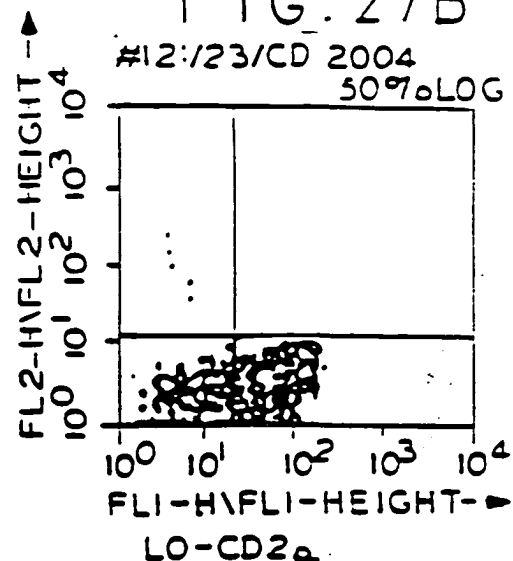


FIG. 27C

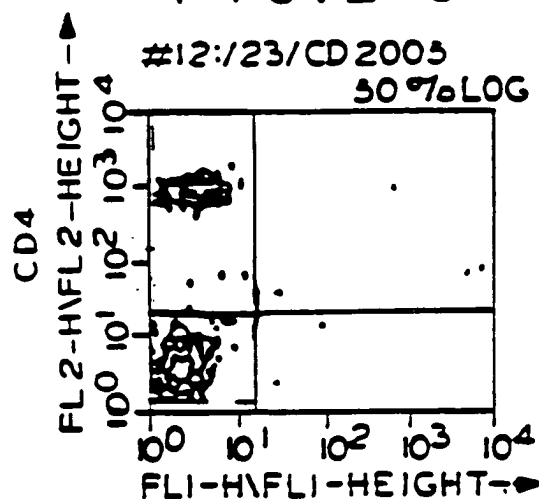


FIG. 27D

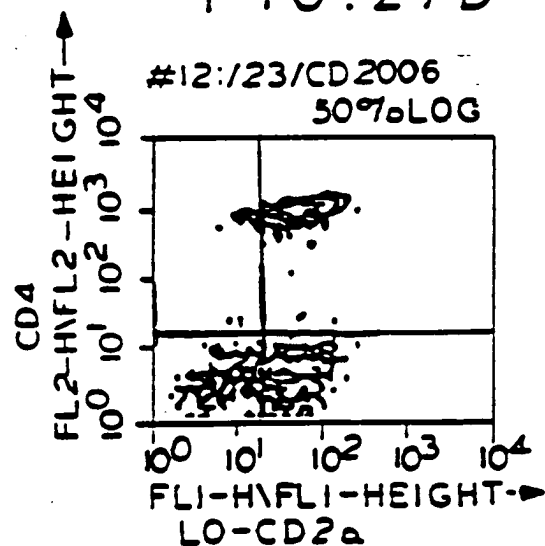


FIG. 27E

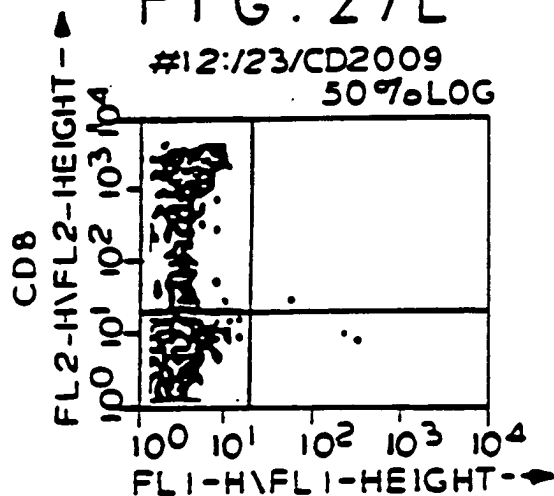


FIG. 27F

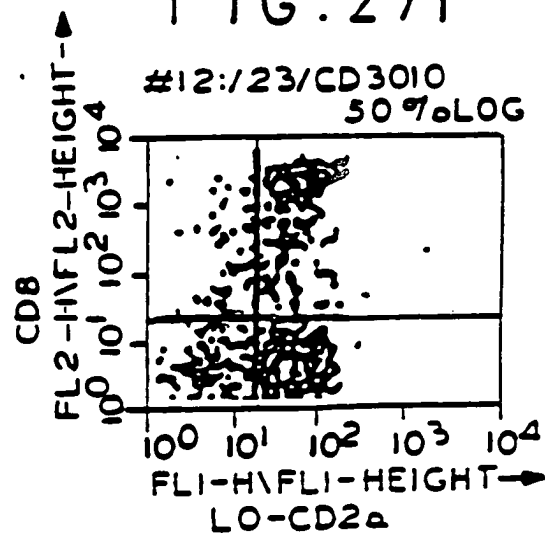


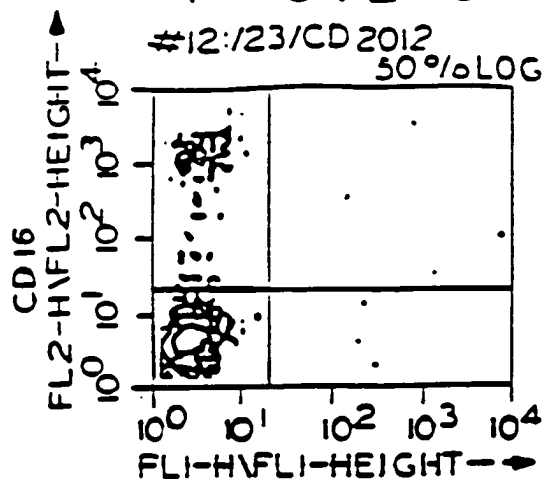
FIG. 27G ^{32/41}

FIG. 27H

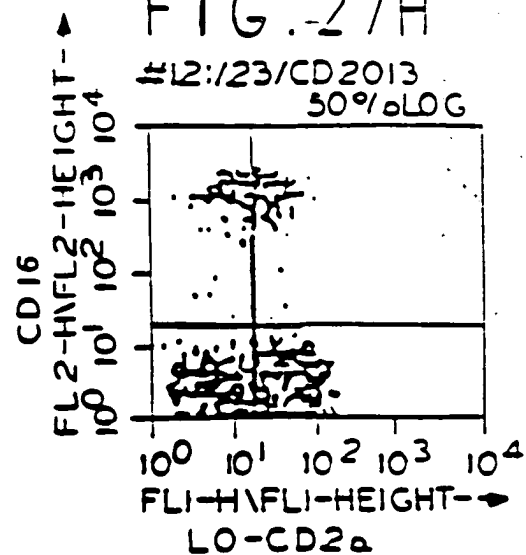


FIG. 27I

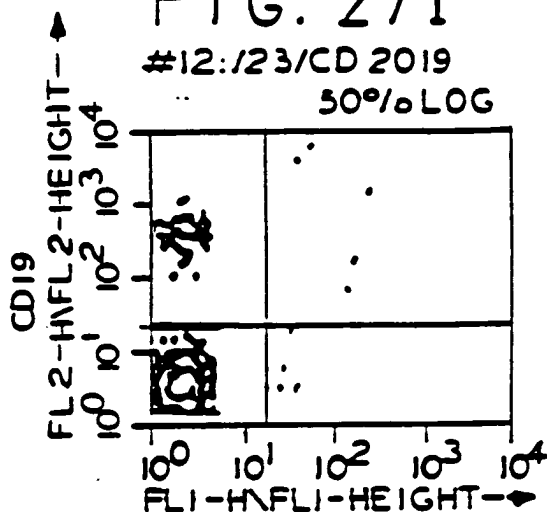


FIG. 27J

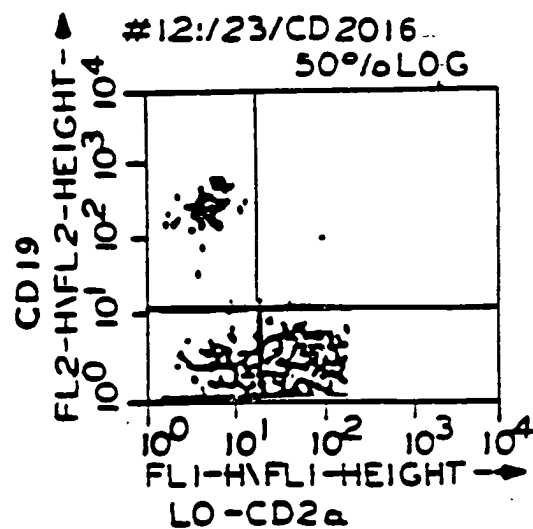


FIG. 27K

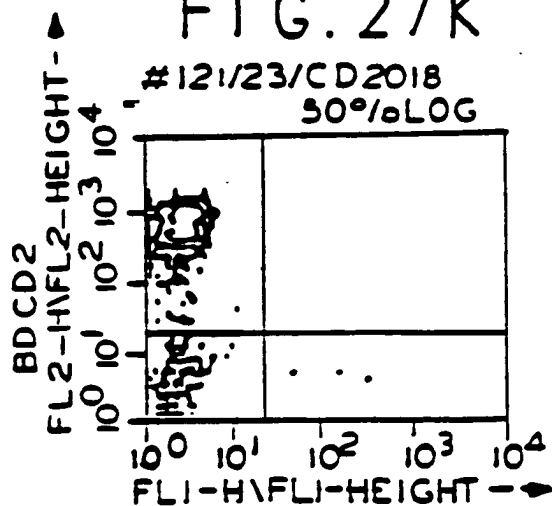


FIG. 27L

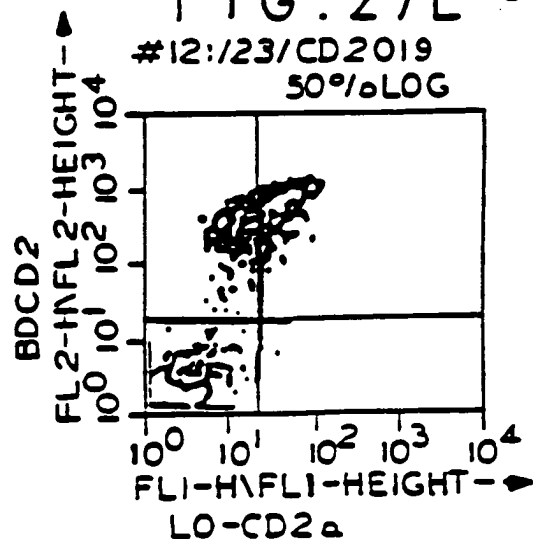


FIG. 28A

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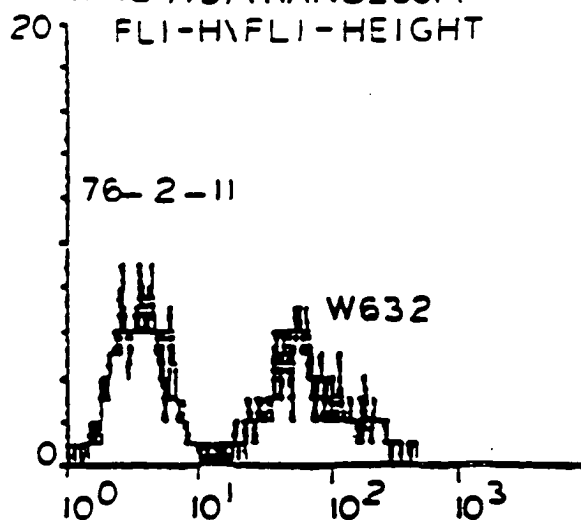
#12:/13/TRANS2001\
FLI-H\FLI-HEIGHT

FIG. 28B

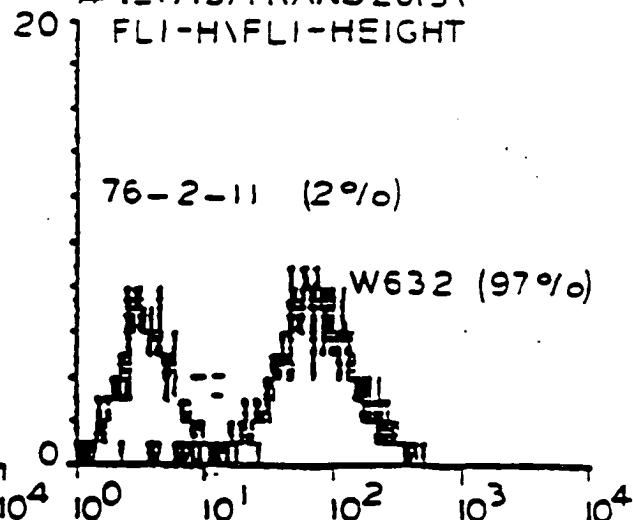
#12:/13/TRANS2013\
FLI-H\FLI-HEIGHT

FIG. 28C

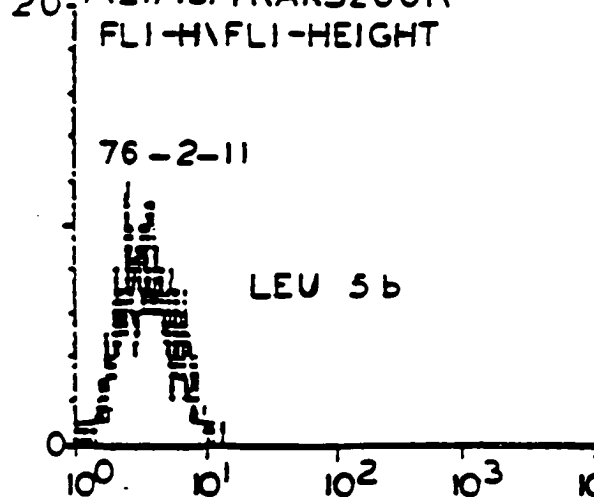
#12:/13/TRANS2001\
FLI-H\FLI-HEIGHT

FIG. 28D

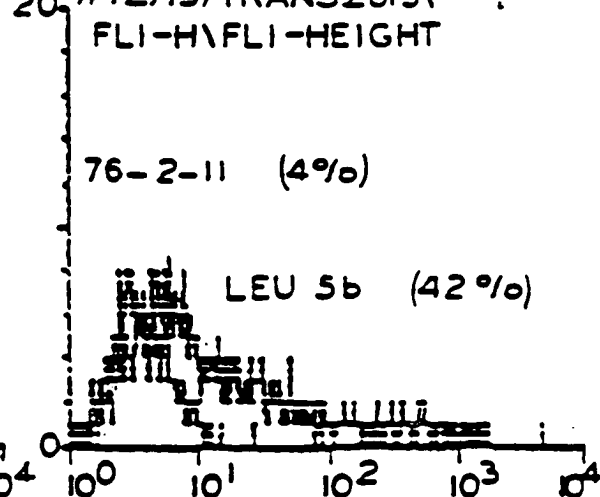
#12:/13/TRANS2013\
FLI-H\FLI-HEIGHT

FIG. 28F

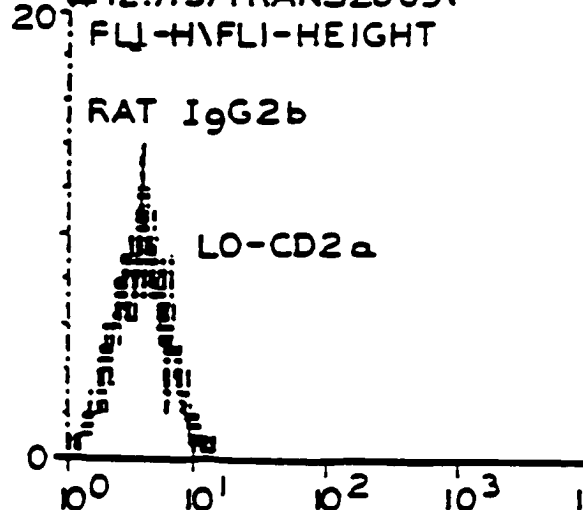
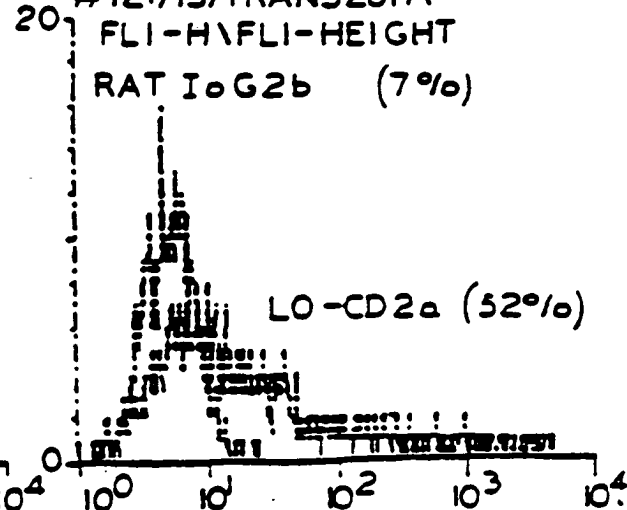
#12:/13/TRANS2005\
FLI-H\FLI-HEIGHT

FIG. 28F

#12:/13/TRANS2017\
FLI-H\FLI-HEIGHT

Lo-CD2a VL + Native Leader Sequence

Sequence Range: 1 to 761

10 * 20 * 30 * 40 * 50 * 60 * 70 * 80 * 90 * 100 *

ATGATGAGTCCCTGTCAGTCCCTGTTCTGTTATTGCTTTGGAATTCGTGAGTAAGAAATGAGTAACTACAGACAAGAAATGGGATGAGATGAGTTCT

-20

110 * 120 * 130 * 140 * 150 * 160 * 170 * 180 * 190 * 200 *

GACTGCCCATGTGGCTGTCCATGTGTGTAAGCAGCTCCTATTCTTCTAAGATGACACTTGAGATTCCTTACTGATTAATGAGAAATTACAGATGAG

210 * 220 * 230 * 240 * 250 * 260 * 270 * 280 * 290 * 300 *

ATAGATTTGTGCTAAGAGATTCTAATGATGAGAAAGGTGATGCCATTAGAGATCTGCCAACGGAATTTTGTGAAAAAGCAATTTGGTATATTTT

310 * 320 * 330 * 340 * 350 * 360 * 370 * 380 * 390 * 400 *

TTAAAAATCACAACACACCGGATCTCACAGAAATGAGTAACAATAATTCACAAGAATTGGTTGCAATTTTGCACATACTTTGTTCTGATC

410 * 420 * 430 * 440 * 450 * 460 * 470 * 480 * 490 * 500 *

TATTATTAATTTTCAGAACCAATGCTGATGTTGTCTGACCCAGACTCCACTTACTTTAATTTGGCTTACCATTTGGACAATCAGTCTCCATCTCTTGACGTCA

510 * 520 * 530 * 540 * 550 * 560 * 570 * 580 * 590 * 600 *

AGTCAGAGTCTCTTACATAGTAGTGAACACCTATTAAATTGGTTGCTTACAGAGACAGGACCAATCTCCACAGACCGCTAATTTTATTTGGTATCCAAAC

610 * 620 * 630 * 640 * 650 * 660 * 670 * 680 * 690 * 700 *

TGGAATCTGGGTCCTCCACACAGTTTCAGTGCAGTGGGTCAAGAACAGATTTCACACTCAAAATCAGTGAAGTGAAGCTGAGGATTTGGGGTTTATTA

710 * 720 * 730 * 740 * 750 * 760 *

CTGCATGCAATTTACCAATTAATCCGTACACGTTTGAGCTGGACCAAGCTGGAAGTAA

C M Q F T H Y P Y T F G A G T K L E L K>

Fig-29

LoCD2a VH + Native Leader Sequence

83/477989

Sequence Range: 1 to 491

```

      10      20      30      40      50      60      70      80      90     100
      *      *      *      *      *      *      *      *      *      *
ATGAATGACAGTGATCATCCTCTTCTTGATGCGAGTAGCTACAGGTAAGGCACTCCCAAGTCCCTAACTTGAGAGATCATACCTTGGGAGACAGTGA
M K C R W I I L F L M A V A T G>
-19
      110     120     130     140     150     160     170     180     190     200
      *      *      *      *      *      *      *      *      *      *
CACTATCTTTGGATTCTTTCACAGGGTCACTCAGAGTCCAGCTGCAGCAATCTGGGCTTGAGCTTCAGAGACCCGGGCTCAGTCAAGTTGTCG
      V N S E V Q L Q Q S G P E L Q R P G A S V K L S>
      210     220     230     240     250     260     270     280     290     300
      *      *      *      *      *      *      *      *      *      *
TGCAAGGCTTCTGGCTATATATTACAGAACTACTATATAGTACTGGGTGAGCAGAGGCTTAACAGGGCTGAAATTAGTAGAAGATCGATCCTGAAG
C K A S G Y I F T E Y Y M Y W V K Q R P K Q G L E L V G R I D P E>
      310     320     330     340     350     360     370     380     390     400
      *      *      *      *      *      *      *      *      *      *
ACGTAAGTATTGATTATGTGAGAGTTCAAAAGAGGCGCACACTGACTGCAGATACATCGTCCAAACACAGCCTACATGCACTCAGCAGCCTGACATC
D G S I D Y V E K F K K A T L T A D T S S N T A Y M Q L S S L T S>
      410     420     430     440     450     460     470     480     490
      *      *      *      *      *      *      *      *      *
TGAGACACAGCAACCTATTTTGTGCTAGGGGAAATTCACACTATCGATTGTGCTTACTGGGCCAAGGCACCCCTCGTCACAGTCTCTCA
E D T A T Y F C A R G K F N Y R F A Y W G Q G T L V T V S S>
      90     180     270     360     450

```

Figure 30

5/17/95

**Light Chain Variable Region Sequences of rat LO-CD2a,
human HUM5400, and humanized LO-CD2a**

	FR 1	CDR 1	FR 2
	* * 20	30 40 **	* *
Rat LO-CD2a Vk	DVVLTTQTPPT LLATIGQSVS	ISCRSSQSLL HSSGNTYLNW	LLQRTGQSPQ
Humanized Vk	---M--S--S --V-L--PA-	-----	---P-----
Human HUM5400 Vk	---M--S-LS -PV-L--PA-	-----V Y-D--H--	FQ--P--R

	CDR 2	FR 3	CDR 3
	* 60 70	80 * 90	100
Rat LO-CD2a Vk	PLIYLVSKLE SGVFNRFSGS	GSGTDFTLKI SGVEAEDLGV	YYCMQFTHYP
Humanized Vk	-----D-----	-----V-----	-----
Human HUM5400 Vk	R---K--NRD ---D-----	-----R-----V--	-----G--W-

	FR 4
	110
Rat LO-CD2a Vk	YTFGAGTKLE LK
Humanized Vk	---Q-----I-
Human HUM5400 Vk	---Q-----I-

Humanized LO-CD2a Light Chain V Region

Sequence Range: 1 to 807

```

* 10 20 30 40 50 60 70 80 90 100
AAGCTTCATGATGAGTCCTGTCCAGTCCTGTTCTGTTATGCTTGGATTCTGGGTAAGTAGAGAATGAGTTACAGGACAAGAATGGGATGGAGGAT
M M S P V Q S L F L L L L W I L G>
110 120 130 140 150 160 170 180 190 200
* 110 120 130 140 150 160 170 180 190 200
GAGTTCGACTGCCCATGTTGGCTGTCCATGTGTGTAAGGCAGGTCCTATTTTCTAAGATGGACACITTGAGATTCCATTACTTGATAATGAGAAATTAC
210 220 230 240 250 260 270 280 290 300
* 210 220 230 240 250 260 270 280 290 300
AGATGAGATAGGATTTGTCTAAGAGGATTCTTAATGTAGATGAGAAGGTGTATGCCATTTAGGATCTGCAACCGAATTGTTTGTGAAAAAGCATTTTGGT
310 320 330 340 350 360 370 380 390 400
* 310 320 330 340 350 360 370 380 390 400
ATATTTTTTAAATAATCAAAAAACACACCGGGATCTCACAGGAAATGAGTAACAAAAAGTAATTCACAAAGATTGGTTGCAAAATTTTGCACATAACTTTGT
410 420 430 440 450 460 470 480 490 500
* 410 420 430 440 450 460 470 480 490 500
TCTGATCTATTATAATTCAGGAACCAATGTTGTGATGTTGATGACCCAGAGTCCACCTTCATTATTGGTAACTTGGGACAACCCAGCTTCCATCTCTTG
T N G D V V M T Q S P P S L L V T L G Q P A S I S C>
510 520 530 540 550 560 570 580 590 600
* 510 520 530 540 550 560 570 580 590 600
CAGGTCAAGTCAGAGTCTTTACATAGTAGTGGAACACCTATTAAATTTGGTTGCTACAGAGGCCAGCCAAATCTCCACAGCCGCTAAATTTATTGGTA
R S S Q S L L H S S G N T Y L N W L L Q R P G Q S P Q P L I Y L V>
610 620 630 640 650 660 670 680 690 700
* 610 620 630 640 650 660 670 680 690 700
TCCAAACTGGAATCTGGGGTCCCGACAGGTTTCAGTGGCTCAGGGAGTGGAACAGATTTCACACTCAAAATCAGTGGAGTGGAGCTGAGGATGTGGGGG
S K L E S G V P D R F S G S G S G T D F T L K I S G V E A E D V G>
710 720 730 740 750 760 770 780 790 800
* 710 720 730 740 750 760 770 780 790 800
TTTATTACTGCATGCAATTTACCCATTATCCGTACACGTTTGGACAAGGGACCAAGCTGGAAATCAAAACGTGAGTAGAATTTAAACTTTGCTTCCTCAGT
V Y Y C M Q F T H Y P Y T F G G Q G T K L E I K>

```

TGGATCC

Fig. 32

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Heavy Chain Variable Region Sequences of rat LO-CD2a, human Amu 5-3, and humanized LO-CD2a

	FR 1	CDR 1	FR 2
	10 20 30 40 * 50		
Rat LO-CD2a Vh	EVQLQQSGPE LQRPGASVKL SCKASGYIFT EYYMYWVKQR PKQGLELVGR		
Humanized Vh	Q---V---A- VKK-----V -----T-- -----R-A -G-----M--		
Human Amu 5-3 Vh	Q---V---A- VKK-----V -----T-- G---H--R-A -G-----WM--		

	CDR 2	FR 3
	60 * * * * 80 * * 90 100	
Rat LO-CD2a Vh	IDPEDGSIDY VEKPKKKATL TADTSSNTAY MQLSSLTSED TATYFCARGK	
Humanized Vh	-----V-- -----S-- -E-----D- --V-Y-----	
Human Amu 5-3 Vh	-N-NS-GTN- AQ--QGRV-M -R---IS-- -E--R-R-D- --V-Y----R	

	CDR 3	FR 4
	110	
Rat LO-CD2a Vh	FNYR/////FAYWGQ GTLVTVSS	
Humanized Vh	-----//-----	
Human Amu 5-3 Vh	TE-IVVAEG-D-----	

Fig. 33

* 610 * 620 * 630 * 640 * 650 * 660 * 670 * 680 * 690 * 700 *
 AGGGA CAC CCT TGG GAG TCA GAA A GGG TCA TT TGG GAG CCG GGG CTT G CAG ACA GAC AT C C T CAG C TCC CGG A C T T C A TGG C C CAG A G A T T T A T A G G G A T C

Fig. 34

08/477989

Binding of LO-CD2a and LO-CD2a Hu
to Jurkat Cells

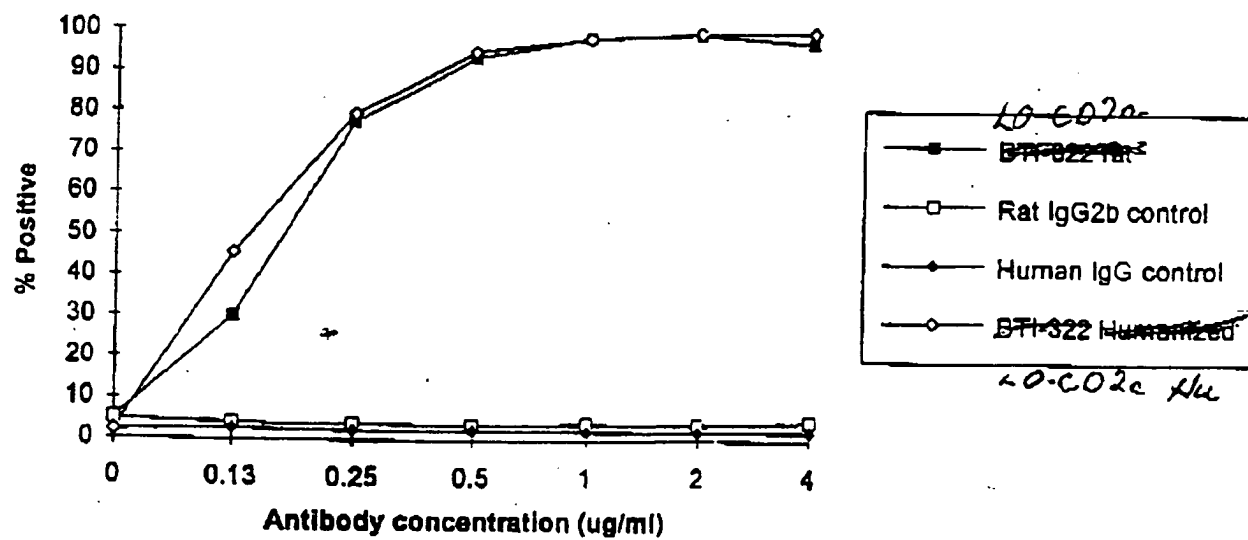


Fig. 35

Induction of Hyporesponsiveness *in vitro*

Additions to primary MLR:

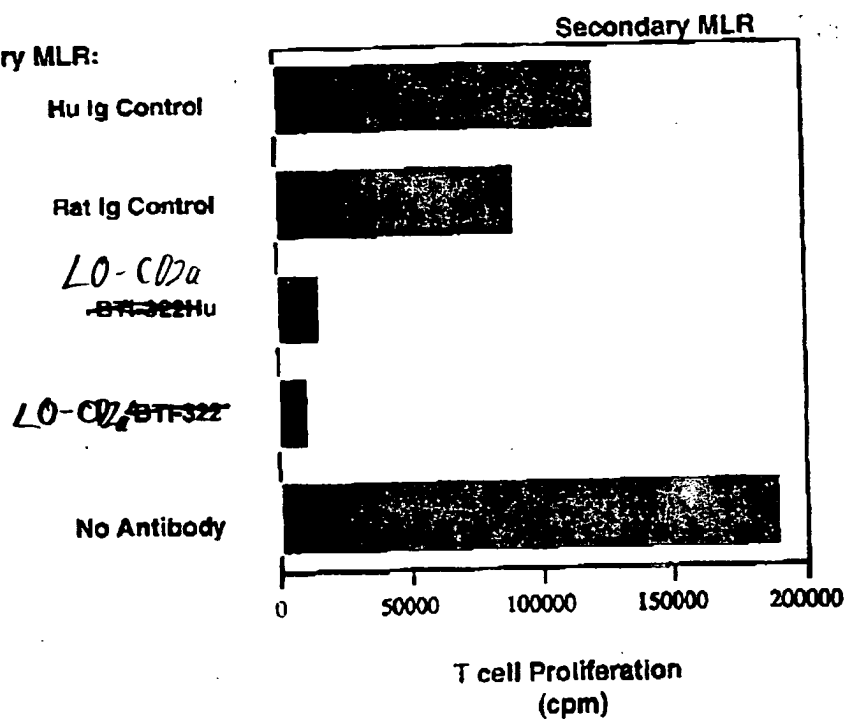


Fig. 3.6

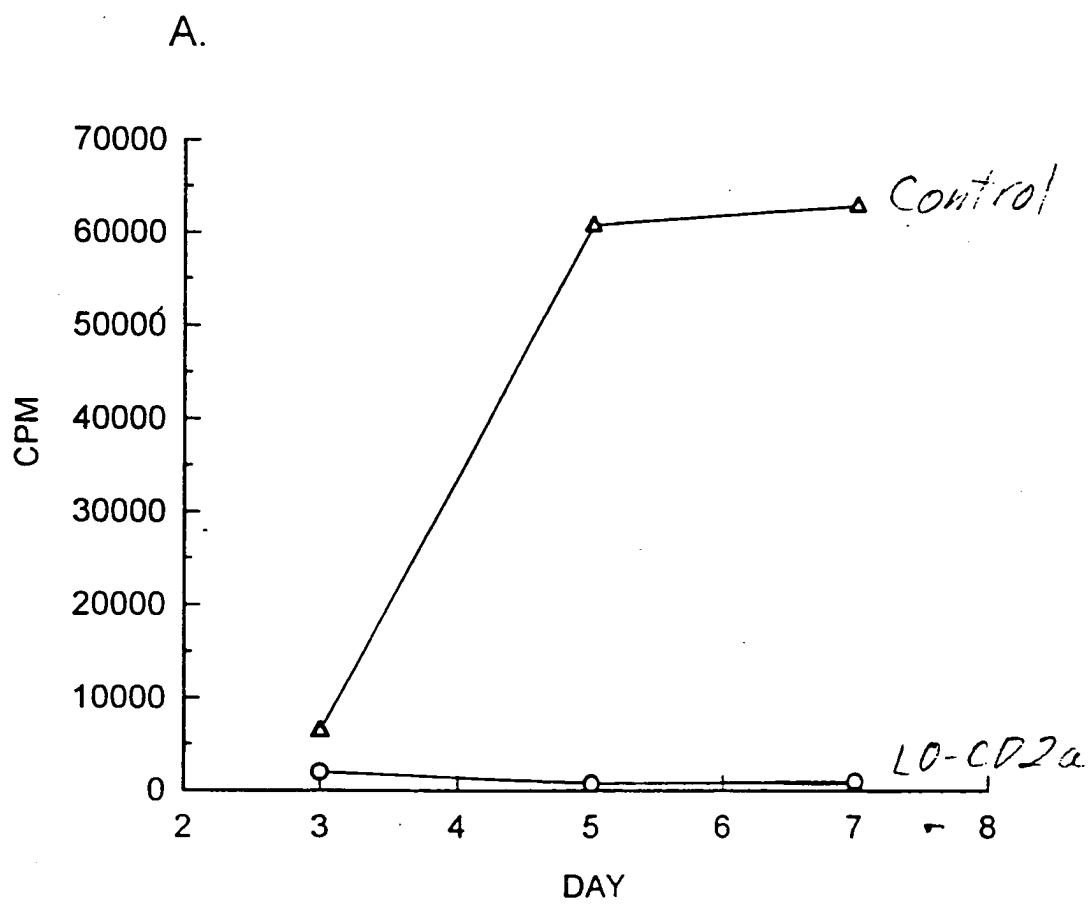
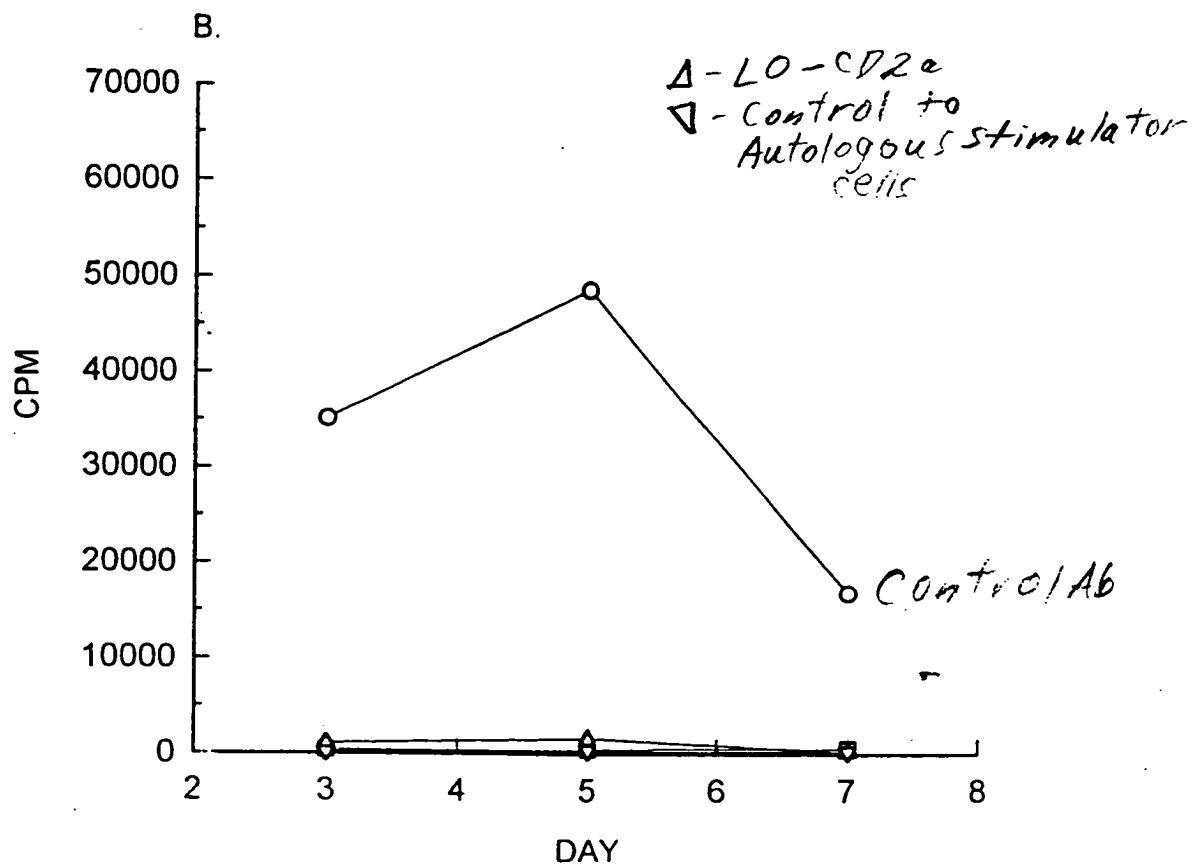


Fig. 37A



110 318

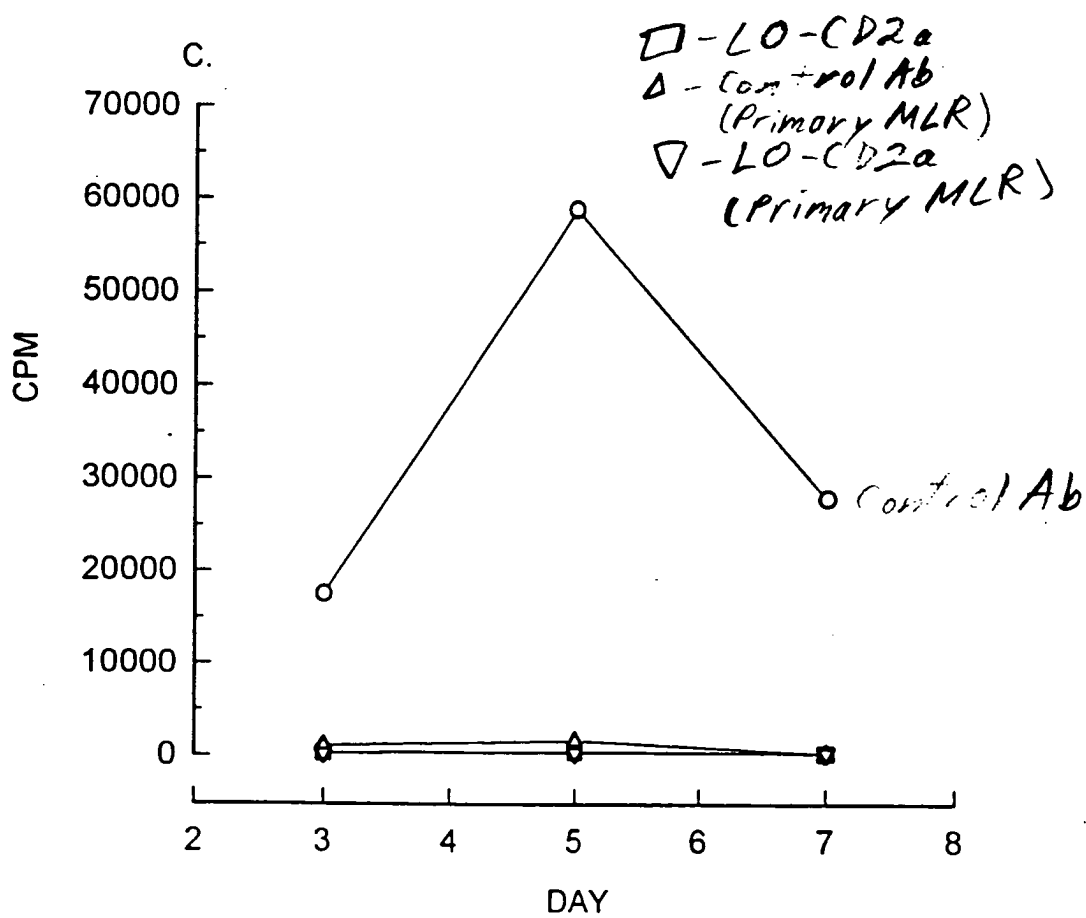


Fig. 37C

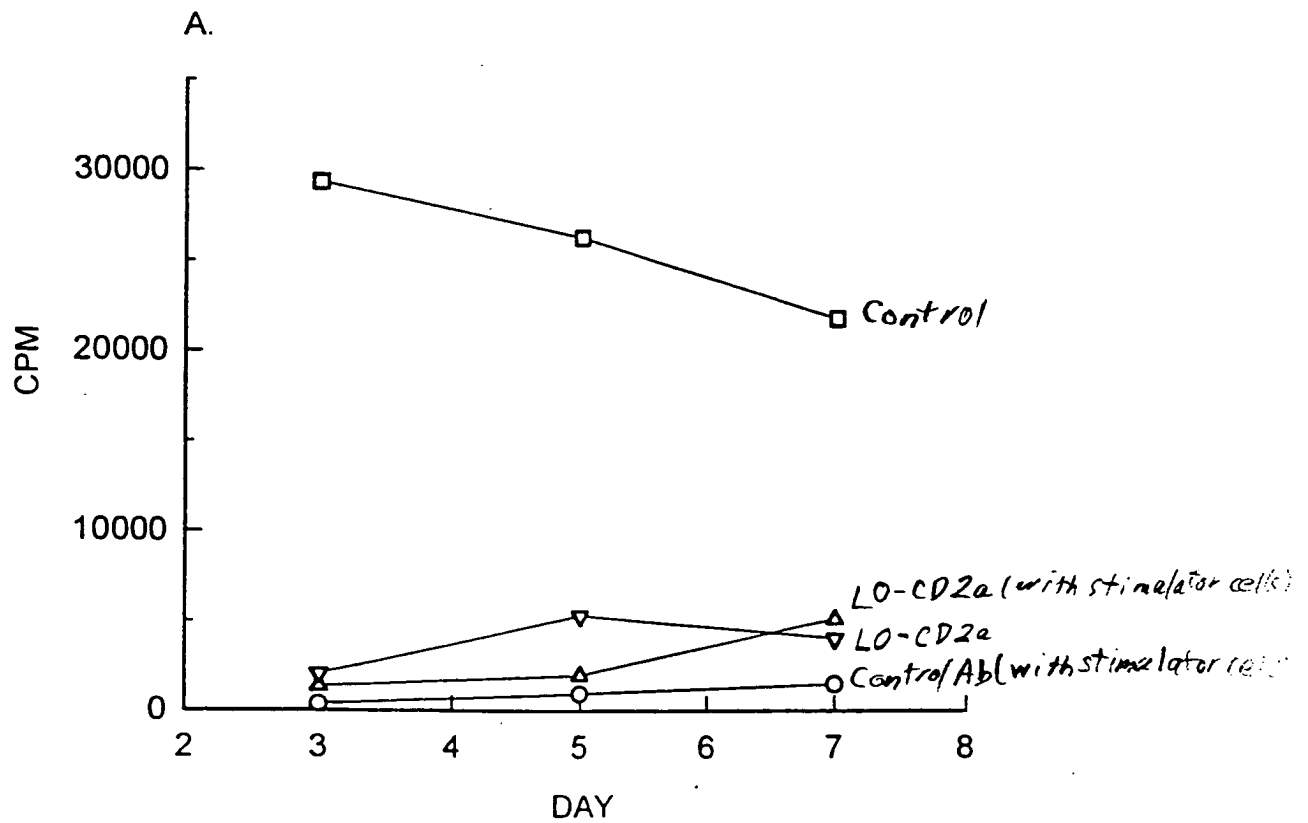


Fig. 38A

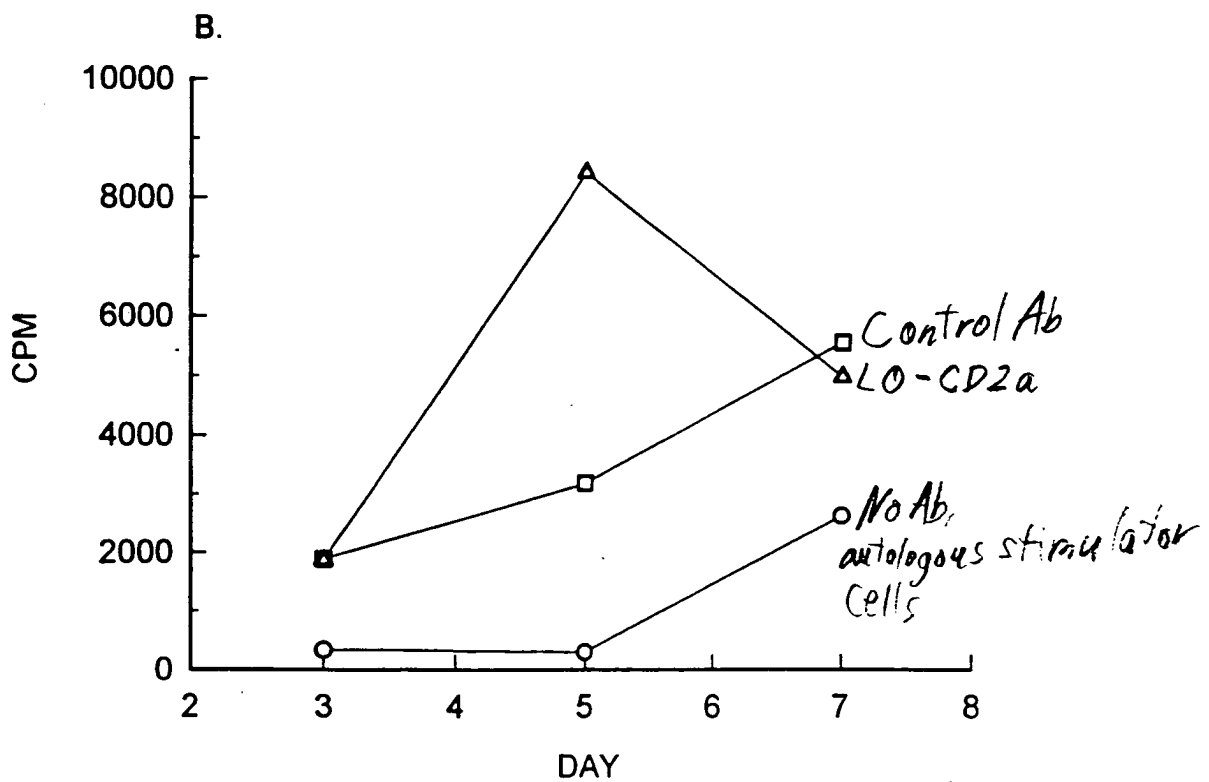


Fig. 38B

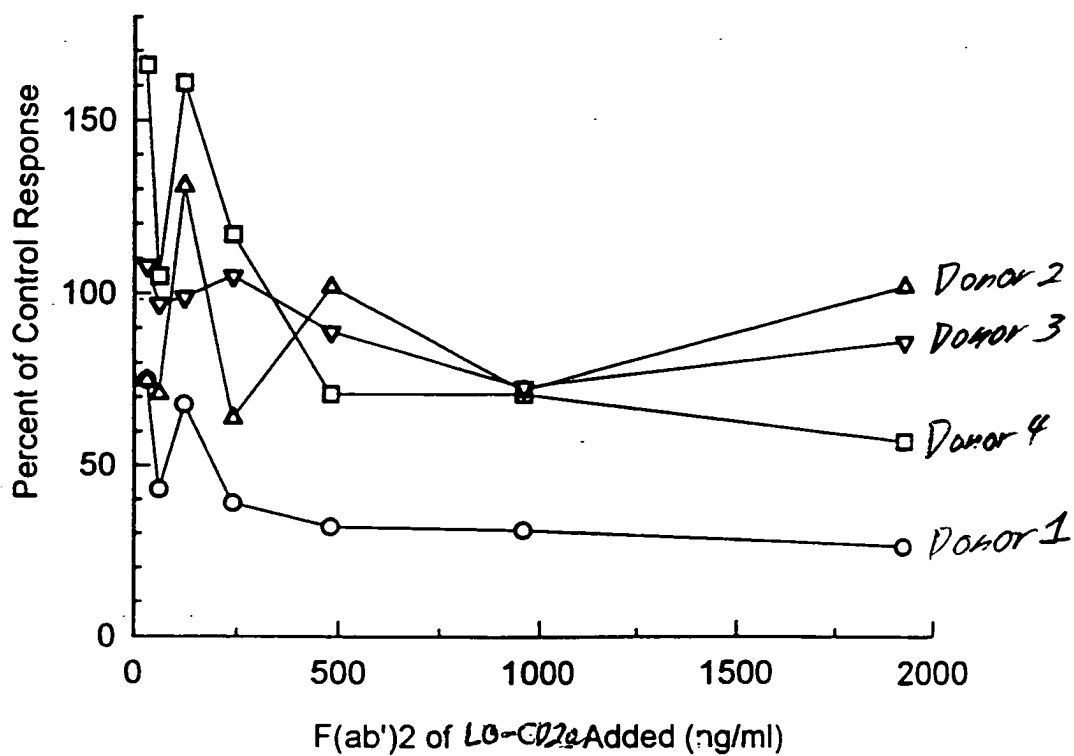


Fig. 39

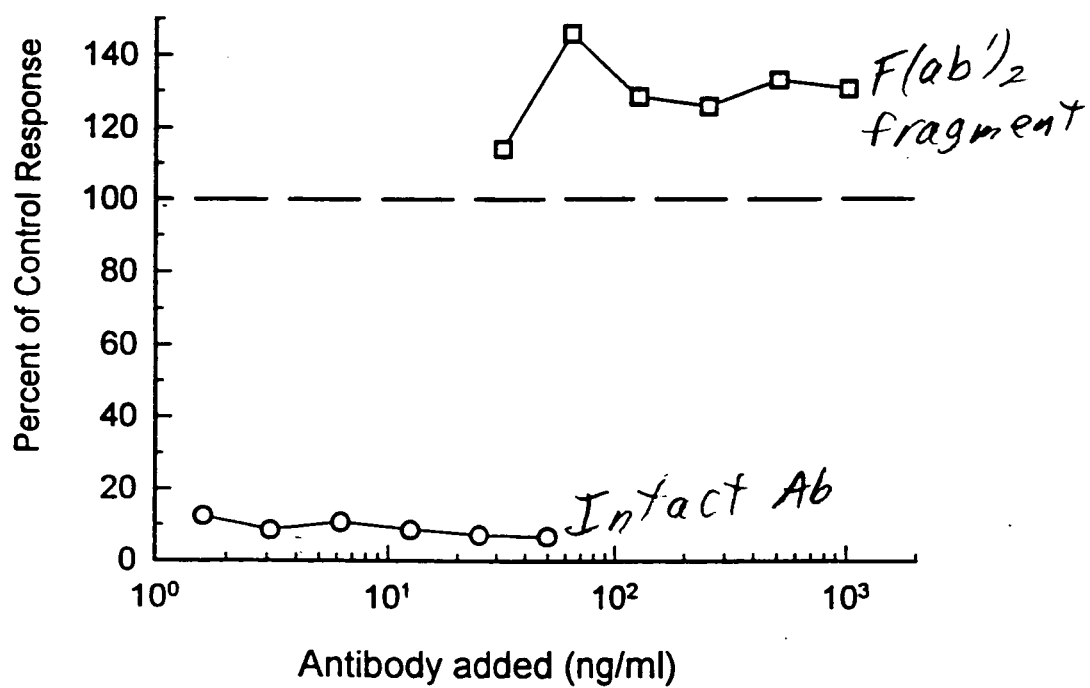


Fig. 40

7

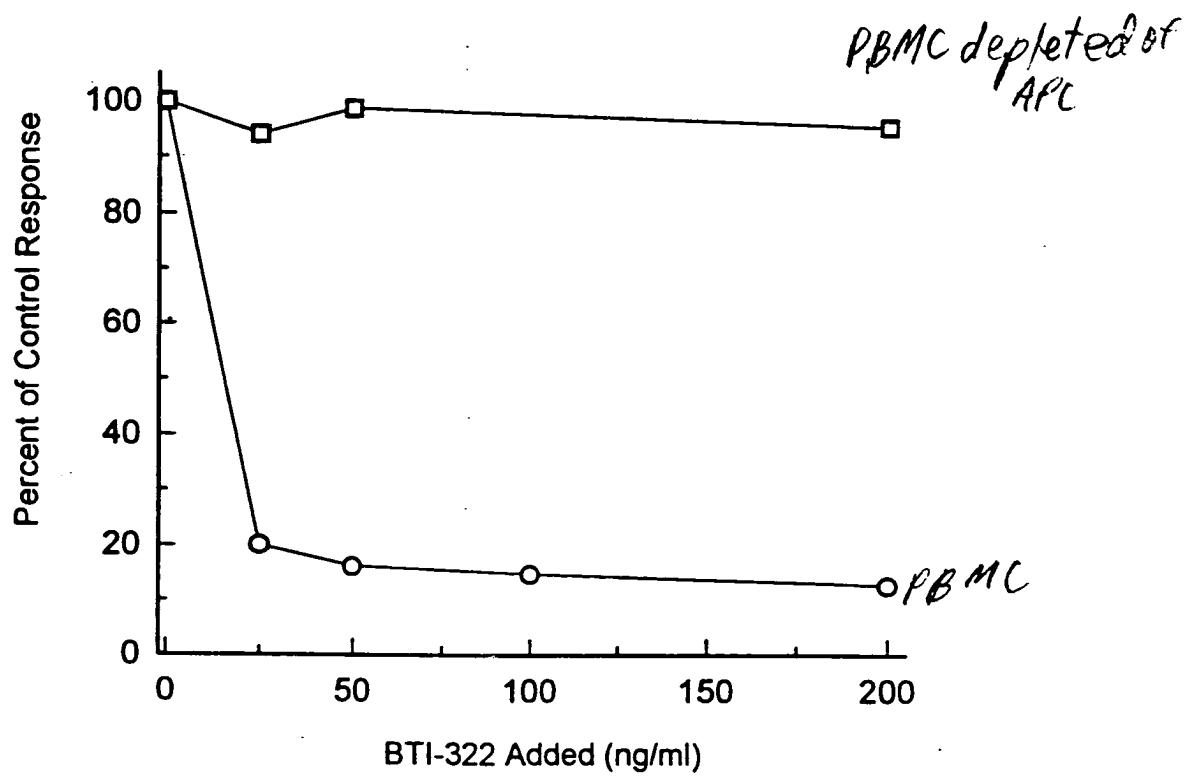


Fig. 41